



JPRS Report

Epidemiology

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Epidemiology

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19 October 1992

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REGIONAL AFFAIRS

Burundi, Rwanda Deal With Meningitis Epidemic

AB2909145392 Bujumbura Radio-Television Nationale du Burundi Radio in French 1800 GMT 28 Sep 92

[Editorial Report] Bujumbura Radio-Television Nationale du Burundi Radio in French at 1800 GMT on 28 September carries a report by Didas Ndikumana that says: "By 27 September, 1,656 cases of meningitis, and 217 deaths were registered. There were four new cases of meningitis this morning, which brings the total to 1,660 cases. The number keeps on increasing. The epidemic is still in the expansion phase, according to a report by the minister of health, Norbert Ngendabanyikwa. This is therefore an emergency which has not left the international community (?unconcerned)." The report states that France and Belgium will send a medical team as well as vaccines and that the United States, EC, WHO, and UNICEF will also contribute to the fight against meningitis. In order to control the spread of the disease, Burundi plans to vaccinate Burundian refugees as they are repatriated from Tanzania or ask the Tanzanian authorities to vaccinate them. The report says an estimated 4 million doses of the vaccine are needed with 1.435 million currently available. The vaccination campaign is expected to start 30 September in the most affected provinces: "Ruyigi, then Cankuzo, Muyinga, Ngozi, and others."

Kigali Radiodiffusion Nationale de la Republique Rwandaise in French at 0430 GMT on 29 September reports on an emergency meeting to confront the current meningitis epidemic held on 28 September at the Amahoro Hotel in Remera, Kigali.

ANGOLA

Epidemic Disease Statistics for Luanda

92WE0677B Luanda JORNAL DE ANGOLA
in Portuguese 22 Aug 92 p 11

[Excerpts] A total of 2,774 people died the first half of this year, out of 1,153,769 cases of epidemic diseases recorded in Luanda Province, the local public health director announced to Angop [Angolan Press Agency].

According to Dr. Vita Vemba, 1,497 people perished out of 98,949 recorded cases of malaria, 232 out of 33,082 cases of acute respiratory disease, 1,038 out of 29,988 cases of acute diarrhea, and seven out of 1,759 cases of sexually transmitted diseases. [Passage omitted]

According to the provincial public health director, "these figures reflect the country's low level of health development, accentuated by extreme levels of nutritional deficit and low food availability."

In addition, he announced that 1,284 children had died in Luanda during the first quarter, out of 1,717 cases of diseases preventable by vaccination.

According to him, 39 children died out of 44 recorded cases of tetanus, five out of seven cases of polio, 206 out of 289 cases of tuberculosis, 901 out of 1,288 cases of measles, and 133 out of 196 cases of whooping cough recorded during the quarter.

The high level of infectious-contagious diseases, he added, is due to the "ignorance" of the populace about recommended preventive measures, and the insufficient supply of potable water.

He pointed to other causes, such as "environmental health hazards and the low availability of vaccines. Within all of Luanda's provincial health centers, offices of the Long-Term Vaccination Program (PAV) are functioning."

BURUNDI

'Emergency Plan' Announced Due to Meningitis 'Epidemic'

EA2409112492 Bujumbura Radio-Television Nationale du Burundi Radio in French 1800 GMT 23 Sep 92

[Excerpts] A real emergency plan has just been announced by the minister of health, Dr. Norbert Ngendabanyikwa, with the aim of stopping the progress of the meningitis epidemic.

The progress of the epidemic in only a few weeks has been terrifying. Out of the 15 provinces of the country, 11 have already been affected by this evil. Only Bujumbura, Makamba, Bururi, and Muramvya are untouched. Up to now, 1,275 cases have been registered. However, this is an underestimate in a country where, when one is infected, the reflex is not to see the doctor. Two hundred and nine deaths have been registered. The measures to be taken are designed to curb the epidemic. The minister of health believes this will be achieved.

[Begin Ngendabanyikwa recording] First, an inter-ministerial commission was set on 18 September to fight the meningitis epidemic. It met again this morning. It decided on the following measures: first, to ban all public transport. You know, if there is one case of the disease among 30 passengers travelling, for instance, from Cankuzo to Bujumbura—a journey of about two to three hours—there is time to contaminate the whole bus. And ten days later—the incubation period of the disease varies between one and two weeks—the 30 people will get meningitis and will die. That is why we have to ban public transport.

In addition, any kind of gathering should be avoided because a case where people have congregated could lead to all the people present in the area becoming infected and they could die of meningitis.

We shall also close markets because people gather there. If there are one or two people with the virus, they could give the disease to the whole market. This is why markets should also be closed.

Primary schools should also be closed. As you know, children return home every day. If there is a case of meningitis at home, the child could become infected and when he returns, he could contaminate the school. That is why we must close the primary schools. As secondary schools are generally boarding schools, we have decided to ban outings and visits. If there is a case in a secondary school, the health services will treat those students who usually live near the patient, i.e., students in the same class, those who sleep in the same dormitory, and those who sit at the same table in the dining hall.

We must also close drinking places, you know, where people gather. When one drinks beer, one talks too much. And as one talks, one emits meningitis bacteria and those nearby may become infected. It is a happy time, but after a few days all those who were drinking together could be bed-ridden and might well die. That is why we have to stop all this. [passage omitted]

Because when it rains it pours, bacillary dysentery is also severely affecting Muramvya Province, particularly Mwaro. This disease, which is referred to as one of hygiene, remains entrenched, despite the advice and drugs provided by doctors. We have already recorded about 3,404 cases and 41 deaths. [end recording]

CAMEROON

Governor Reports Epidemics in Far North

92WE0611A Yaounde CAMEROON TRIBUNE
in French 21-22 Jun 92 p 12

[Interview with Benoit Namvou, governor of Extreme-Nord province, by Isidore Mendeng; place and date not given: "Cholera Epidemic Has Been Stopped"]

[Excerpts] Today we begin publication of the interviews we conducted with provincial governors following their second semiannual conference, held 15-17 June 1992 at Yaounde City Hall. [passage omitted]

Our interlocutor this morning is the governor of Extreme-Nord province, Mr. Benoit Namvou, who discussed the cholera and meningitis epidemics that have brought death and desolation to his province. [passage omitted]

Mendeng: Have the epidemics of meningitis and cholera been completely eradicated?

Namvou: The first cases of cholera in Extreme-Nord were identified on 10 May 1991. That epidemic was finally stopped by 31 December 1991, after 3,033 cases of the disease had been identified, 440 of them fatal.

In the first two weeks of January 1992, an epidemic of cerebro-spinal meningitis began to ravage Extreme-Nord.

With the onset of the rains in May 1992, the meningitis epidemic was completely stopped. We recorded 7,608 victims, 713 of whom died.

In Diamare: 3,247 cases, 243 deaths.

In Kaele: 407 cases, 58 deaths.

In Mayo-Danay: 257 cases, 44 deaths.

In Mayo-Sava: 1,837 cases, 210 deaths.

In Mayo-Tsanaga: 1,880 cases, 158 deaths.

I would like to take this opportunity to thank the various organizations that came so promptly to our aid: the Ministry of Health, USAID [U.S. Agency for International Development], the World Health Organization, the Swiss Medecins Sans Frontiere, Belgium, Canada, the National Lottery, the Sahel Club Association, the Red Cross, Save the Children, etc., which provided about 641,250 doses of vaccine and diverse medicines to the provincial health officials.

Our local residents, who until recently were not very responsive to the preventive vaccination campaign, due to some disinformation that had been disseminated, have now realized the necessity and value of the vaccines, which offer the only means of preventing such epidemics. [passage omitted]

GHANA

Cholera Outbreak in Ashanti District

92WE0690A Accra PEOPLE'S DAILY GRAPHIC
in English 6 Aug 92 p 8

[Article by Asiedu Marfo; boldface words as published.]

[Text] A cholera outbreak has occurred at Banka, a farming community in the Asante Akim South District of Ashanti, leaving five people dead so far.

Fifteen cases have so far been reported.

Dr. N.S. Kanlisi, acting Ashanti Regional Director of Health Services, "speaking in an interview, said he had a report on the incidence on Tuesday, 28 July.

He said the Asante-Akim South District health management team sent a team to investigate the report and found out that there have been cases of diarrhoea and vomiting.

Dr. Kanlisi said the cases were sent to Breniase health centre in the Eastern Region and that the Eastern Regional health administration has been contacted on the outbreak.

He said the team has come back to collect logistics including drugs to contain the situation.

He said affected homes would be sprayed and people who have had contact will be treated.

KENYA

Typhoid Outbreak in Nakuru Town

92WE0685C Nairobi *THE KENYA TIMES* in English
21 Jul 92 p 16

[Text] An outbreak of typhoid has been reported in Nakuru town. Two people are suspected to have died as a result.

The two deaths have caused a lot of fear and panic among the town's residents who suspect that the disease has been caused by contaminated water.

"On Friday, we confirmed 10 positive cases and today (Monday) we have 15 samples of blood to examine," a source at the Nakuru Provincial General Hospital said.

The source further said forty cases were confirmed last week and added that of all samples received, over 40 percent were positive.

Contacted for comment the Hospital Superintendent, Dr. B.K. Kariuki, said there were no serious cases but confirmed that there was a suspected outbreak of the disease.

Dr. Kariuki, however, said the hospital staff have been put on alert following "the reports in town."

The Nakuru Municipal Officer of Health, Mr. Maundu said he had not yet received a report about the outbreak. He said under the law, medical institutions within his jurisdiction are required to report any outbreak of an epidemic or any other disease that can cause concern among them.

Dr. Maundu said he had not yet received any report in connection with the contaminated water and maintained that the council's engineers treated the water used in the town.

Contacted for comment, the town clerk also denied that the Municipal Council did not treat water.

Thirty-Five Cholera Deaths in Homa Bay District

92WE0685A Nairobi *THE KENYA TIMES* in English
25 Jul 92 p 5

[Text] Thirty-five people have died of cholera in Homa Bay District in the past two months, the District Executive Committee meeting was told.

A report to the committee by the hospital secretary on behalf of the Medical Officer of Health, Dr. Sam Achola reported that 13 more people have been admitted to the Homa Bay Hospital for treatment.

Dr. Achola said the ministry will combat the spread of the disease but appealed to the provincial administration to create awareness among wananchi on its prevention.

Meanwhile, the School of Environment of Moi University will establish a research unit at Homa Hill Centre to

study soil erosion problems and the possibility of harnessing geo-thermal power at various points in the area.

MOZAMBIQUE

Over 12,000 Cholera Cases

MB2109053092 Maputo Radio Mozambique Network
in Portuguese 1730 GMT 16 Sep 92

[Editorial Report] More than 12,500 cases of cholera and 234 deaths have been registered in the country by early this week. A report from the National Health Directorate cited by the MOZAMBIQUE INFORMATION AGENCY, says Gaza Province has registered most with 3,874 cases and 80 deaths, followed by Zambezia Province with more than 2,900 cases and 51 deaths. Maputo Province registered about 2,200 cases of cholera and 31 deaths. The National Health Directorate reported a progressive increase in the number of registered cholera cases.

NAMIBIA

'Virulent Strain' of Measles in Windhoek

Windhoek *THE NAMBIAN* in English 16 Sep 92 pp 1-2

[Editorial Report] A "virulent strain" of measles in Windhoek and possibly the whole country has resulted in "about 190 admissions to hospital in August alone, and nine deaths." According to Andreas Obholzer, superintendent of Windhoek State Hospital, "another 70 cases" had been admitted to hospital so far in September and that the epidemic "had been getting steadily worse" since June. In about 80 percent of the cases, the patient had not been vaccinated. Efforts at house-to-house visits to vaccinate children have begun, but urban migration, squatting, and people with no fixed address had resulted in many being missed. "Other parents, Obholzer added, simply 'didn't care'."

SOUTH AFRICA

Health Officials Warn Against Influenza Virus

92WE0628A Johannesburg *SUNDAY STAR* in English
5 Jul 92 p 3

[Article by Mark Stansfield; First paragraph is introduction]

[Text] Flu killer: South Africa is in the grip of two potentially lethal influenza viruses this winter. The frail and the very young are particularly at risk, doctors warn.

A nasty flu virus from China and a lesser-known cousin from South America are at present wreaking havoc with the economy, costing thousands of valuable man-hours.

They are also partly responsible for the deaths of at least four elderly Johannesburg residents. Scores more could have died from the complications—including babies—

according to the city council's Medical Officer of Health, Professor Nicky Padayachee.

"We were expecting A-Beijing to hit last year, but this year's outbreak is bigger than anticipated. We are likely to have deaths from Beijing," he said.

The culprits are known as A-Beijing and B-Panama.

Last January A-Beijing killed two elderly people in Britain and closed all Turkish schools for a week. The invisible pair have now migrated south for the winter—where living conditions are ideal for them to become pandemic.

In South Africa many live in forced close proximity—such as in hostels, there is a danger that the 'flu viruses' could multiply faster, virologists warn.

Virologists at the National Institute for Virology say A-Beijing's effects are "very severe" while B-Panama's are milder.

The institute's acting director, Des Martin, warned that the Beijing strain—and the medical complications which follow infection—could kill the elderly, those with chronic heart and chest diseases, HIV carriers and babies—especially the new-born.

Large PWV employers such as Barlow Rand and Anglo American report hundreds of workers have been laid off by a "lingering" influenza which leads to bronchial complications.

Barlow Rand's Director of Medical Services said three workers a day were being laid off with 'flu' symptoms. "It's really terrible this year. About four percent of the workforce is off."

For workers, being infected by the Beijing or Panama 'flu' means a week or two recuperating in bed and lost manhours for their bosses: for the frail and the very young A-Beijing could mean death.

At the Hillcrest Geriatric Home, located South of Johannesburg's CBD, four elderly patients died in June as a direct result of Beijing complications. Several other residents are luckily now recuperating.

Hillcrest's Matron, Ethnie Laroni, said the virus was "very bad this year".

"Last month four of our residents died from complications after contracting 'flu'. This strain seems to linger and turns into bronchial pneumonia," she said.

Dr. Padayachee recommended that all people over the age of 65 vaccinate themselves against 'flu'.

"It's not too late, because it takes about 14 days for the vaccine to take effect," he said.

Hospitals Report Increase in Influenza Viruses

92WE0597B Johannesburg *THE STAR in English*
10 Jul 92 p 3

[Article by Paula Fray: "Viruses Continue To Attack"]

[Text] Johannesburg hospitals report that there is a significant increase in the number of patients affected by influenza viruses—including the serious A-Beijing variety.

Absenteeism continues to plague the workplace as more people fall victim to the virus.

Doctors warn that certain patients, including the elderly and those with chronic diseases, are at risk. A number of deaths have already been reported.

At Hillbrow Hospital, patient numbers have steadily increased from about 260 to about 380 during the ongoing hospital workers' strike.

An increased number of patients suffering from flu virus complications has also been reported at Johannesburg Hospital during the past few weeks.

According to the National Institute for Virology, a number of non-flu viruses are also in circulation—although these are not as intense as the A-Beijing and the milder B-Panama.

As flu is not a notifiable disease it is "impossible" to keep track of the numbers of people being struck down or those who may have died from flu or flu-related complications.

"What we can say is that we tend to find it runs a course over six to eight weeks," said the Institute's assistant director Dr. Des Martin. Previous patterns show that the viruses usually broke out in June and faded out in early August.

Johannesburg City Council director of community health, Dr. Eric Buch said yesterday it was not too late to be immunised against flu.

It was important that those who contracted a virus refrained from doing any physical exercise.

Companies are still experiencing a high absenteeism rate as a result of flu. According to at least one business association, the already high flu-related absenteeism is rising.

"There has been a lot of absenteeism. It's been quite significant and seems to be on increase," said Catering, Restaurant and Tearoom Association executive director Frank Swarbreck.

High Incidence of Rabies

*MB2308181292A Johannesburg Radio South Africa
Network in English 0500 GMT 18 Aug 92*

[Editorial Report] There is serious concern about the high incidence of rabies in Natal, kwaZulu and the south eastern Transvaal. Sixteen people have died of rabies this year, with nearly 160 cases reported in Natal and 35 in the Transvaal. In the Transvaal more cases were reported in the first six months of this year, than were reported in the whole of last year. The deputy director of animal health in the Department of Agriculture, Dr. Gideon Bruckner, said the high number of rabies cases could be ascribed to the seasonal increase and to unrest conditions in Natal. Because of the unsafe conditions in residential areas, veterinarians could not enter them to inoculate animals.

Salmonella Epidemic Hits Western Cape

*92WE0640D Cape Town WEEKEND ARGUS
in English 31 Jul 92 p 2*

[Article by Roger Friedman, staff reporter: "Salmonella Outbreak Rocks Western Cape Poultry Industry"]

[Text] About 55,000 broiler chickens in the Western Cape have died in a huge outbreak of salmonella which has stunned the poultry industry.

Some flocks have been reduced by 30 to 40 percent, a State veterinarian has confirmed.

People who eat infected meat without cooking it thoroughly may develop food poisoning, with abdominal pain, nausea or diarrhoea.

The veterinarian said it was likely some birds carrying the bacteria, but not showing symptoms, had reached supermarket shelves.

Salmonella enteritidis is a bacterium specifically adapted to the hen. It spreads rapidly through modern intensive rearing establishments. The bacterium lives in the oviducts of infected birds.

Although salmonella has been around for centuries, this is the first major epidemic recorded in South Africa.

The outbreak is confined to the broiler industry. It has not had any effect on egg-producing chickens.

City medical officer of health Dr. Michael Popkiss said cooked poultry posed no hazard to human health.

He said consumers should be aware of the risk of cross-contamination in using the same knife to prepare the raw bird as to carve it when cooked.

Mr. William Carter, owner of Golden Grove, which has escaped the epidemic, said he had heard about outbreaks in "one area". He would not elaborate.

The State vet said a number of farms in the Western Cape were affected. The birds have been treated with antibiotics."

Group marketing manager for County Fair Mr. Jeremy Owen said: "The deaths of chickens over the past month have led to a shortage which has increased the price of chicken by 20 to 25 percent.

But County Fair managing director Dr. David Finlayson said: "A small number of birds were found to be infected with salmonella.

"The company immediately isolated the problem and disposed of the birds.

"All County Fair products are screened daily for salmonella and have been found to be free of infection."

Mr. Steve Brookes, a professional poultry consultant, said the industry was bewildered by the outbreak which "happened very suddenly."

The State vet said the situation was "nothing to get excited about."

"The problem has been identified and attempts are being made to prevent similar outbreaks in the future."

The chicken abattoirs were aware of the problem and were sampling the processed product to identify contaminated birds.

British egg producers were embroiled in a salmonella row in 1988 when it was discovered that one in 10 samples of processed food containing egg were contaminated.

More than 12,900 cases of food poisoning linked to salmonella were reported by the Public Health Laboratory that year.

SWAZILAND

'Serious Outbreak of Rabies'

*MB2308181292B Mbabane TIMES OF SWAZILAND
in English 17 Aug 92 pp 1, 24*

[Editorial Report] Dr. Robert Thwala, director of veterinary services discloses there is "a serious outbreak of rabies" in the Lubombo region. According to a statement issued by Dr. Thwala, "a case of rabies was confirmed in a dog originating from the Mhlume area on August 6 this year." The following tank areas have been declared rabies alert areas: Ndzaweni, Majembeni, Nduma, Hlofu, Mkhangala, Lomahasha, Macakula, Mananga border post, Tshaneni, Mhlume, Mananga AMC, Tabankulu estate, Vuvulane, Maphiveni, Mlawula, Simunye and Ngomane.

Outbreak of Measles

*MB2109053092C Johannesburg Radio RSA in English
1600 GMT 16 Sep 92*

[Editorial Report] A serious outbreak of measles is sweeping through southern, central and northwestern Swaziland as a result of the [word indistinct] problems in rural areas caused by the ongoing drought. A Swaziland health official says it is particularly children under the age of five who have contracted measles. He says an unbalanced and inadequate diet has weakened their resistance to disease.

UGANDA**Acute Malaria Causing Deaths in Kabale**

*92WE0688B Kampala THE NEW VISION in English
3 Aug 92 p 16*

[Article by Sam Mukalazi. Words in italics, as published.]

[Text] An average of four people per village are dying of acute malaria per week in the border sub-country of Kamwezi in Kabale District. The deaths have been attributed to the prevalent drug resistant malaria parasite.

The most affected parishes are Kigala, Chogo, Rwenyangi and Kibanda. RCs at Nyakabungo parish claimed that over 50 people had died in two parishes in May and June. Most of the people were reported to have died in their homes after about three days of severe headaches and high temperature.

Kamwezi Health Centre, which is the only health centre in the sub-country had been closed since the disturbances owing to the war in Rwanda. It re-opened on 30 May this year, with 349 admissions of malaria cases in June. Ten of the patients died at the forty-bed centre.

It was learnt that 30 blood samples were taken randomly to determine whether there were occurrences of meningitis. It was discovered that 75 percent of the samples had the drug resistant *P. falciparum* malaria parasite which does not respond to chloroquine.

THE NEW VISION was told that the patients who did not respond to chloroquine were put on quinine and many were reported to have recovered. A medical officer who declined to be named attributed the malaria epidemic to under-dose treatment.

He said parasites treated on under-doses of chloroquine tended to develop resistance to the drug.

At Nyakabungo, the RC I Secretary for Defence, Mr. Damazo Banyenzaki, who was found shivering with fever said people were dying in big numbers in the area owing to malaria.

"We bury everyday, even yesterday we buried a child and my neighbour is in a critical condition," he said.

He said besides him he had three other family members suffering from fever and headache. His 13-year-old son had for the last three months stopped going to school because of headaches and fever.

Asked how they treated the disease, he said they had been surviving on a "cocktail" of drugs bought from local shops. He said most people were using chloroquine, maxadol and hedex.

Most people complained of lack of transport to Kabale or Kisiizi hospitals which are far from the remote villages.

Bovine Pneumonia Affecting Moarara District

*92WE0688A Kampala THE NEW VISION in English
7 Aug 92 p 2*

[Article by Caroline Lamwaka]

[Text] Nyabushozi county, Mbarara district is threatened with loss of most of its cattle population of about 300,000 by the end of this year. This is due to the outbreak of the Contagious Bovine Pleural Pneumonia (CBPP) disease and in the face of acute water shortage.

CBPP, whose incubation period is about 6 to 8 months, according to veterinary officials, attacks cattle in the lungs and the animals collapse.

According to RC 4 Chairman Nyabushozi, Mr. Godfrey Karamuzi cattle die because of the foot and mouth diseases as well as the CBPP. He said the disease spread is accelerated by lack of water forcing movement of cattle to and from lakes Mburo and Kachera in search of water.

He said this has forced a number of enlightened cattle farmers to dispose of their herds. Mr. Karamuzi cited a case of one RC 5 councillor, Mr. Nsheka who sold off 20 animals out of 100 after he had lost ten head of cattle. He said: "Only those who are attached to their cows have not sold them off."

The disease is said to have spread to the area in 1990 following purchase of cattle from Kamuli district by one Karakwande, a resident of Buruli county.

Mr. Karamuzi blamed veterinary officials for having issued movement permits to him.

The Council Member for Nyabushozi, Mr. Elly Karuhanga said almost all the cows in Nyabushozi were affected by the disease.

He said when President Museveni heard about the disease in February 1990, he directed that 50 million shillings be provided to Uganda Meat Parkers to buy and sell the cattle meat in a bid to dispose of threatened herds. But despite the President's directive, the money, which was to be released by the Ministry of Finance and

Economic Planning through the Ministry of Agriculture. [As received] Animal Industry and Fisheries was never channelled in time to Meat Packers.

Mr. Karuhanga blamed the extent of spread of the disease to lack of vaccines and on vet officials who he accused of irresponsibility.

The Commissioner for Animal Industry, Dr. Charles Kudamba confirmed drug shortages in THE NEW VISION of 18 July and said Mbarara and Masaka areas were the most hard hit.

ZAMBIA

Record Cholera Deaths in Luapula Province

92WE0555B Lusaka TIMES OF ZAMBIA in English
14 May 92 p 3

[Article by Lawrence Liandisha: "Luapula Cholera Deaths Top 341"; first paragraph is TIMES OF ZAMBIA introduction]

[Text] Cholera and dysentery have ravaged Luapula Province, with cholera cases hitting a record 2,364 in the past two weeks with 341 deaths, area minister Mr. Edward Muonga confirmed.

Mr. Muonga said in Mansa yesterday the major contributing factors to the continued epidemic in his province was the influx of Zaireans.

The problem was further compounded by the drought which had resulted in low water levels which made human effluent more concentrated in water.

The most hit district in the province was Nchelenge with 1,395 cases and 208 deaths.

The breakdown for the other districts is: Mwense 606 cases with 87 deaths; Mansa, 319 cases with 38 deaths; Kawambwa, 37 cases from which seven died.

Samfya the least affected recorded seven cases and one death. Several Zaireans were said to be in the area and it was not easy for police to flush them out or curb their illegal entry because of transport problems.

Both police and immigration in the province were seriously handicapped on transport and needed vehicles and boats if they were to be effective.

Authorities in the province had created cholera and dysentery surveillance committees in all districts and education campaign was stepped up.

Local people were advised to boil water for drinking and to observe high standards of hygiene to curb the alarming rate at which the disease was spreading.

In Nchelenge, deaths were so rampant the place had now been turned into a disaster area. An average of 10 people died everyday.

Over 600 Deaths From Cattle Disease in Mumbwa

92WE0659A Lusaka TIMES OF ZAMBIA in English
15 Jul 92 p 2

[Text] More than 600 cattle have died in Mumbwa district from corridor disease despite efforts by the Veterinary Department in the area to control the outbreak.

District Veterinary officer Dr. Judah Mweepwa said from Mumbwa yesterday there could be more cattle deaths as farmers did not report all cases to field officers.

Dr. Mweepwa said some 681 animals died in May and June and more were still dying although not as frequently now.

"The work of the department to combat the corridor disease in Mumbwa is hampered by free movement of cattle from Southern Province districts of Monze and Namwala," Dr. Mweepwa said.

Because of stock movement restrictions, the Veterinary Department in conjunction with police mounted road blocks to stamp out illegal movement of animals.

"Police in Mumbwa impounded a good number of cattle whose owners contravened regulations. Eight of those died of corridor disease just outside the police station", he said.

With the introduction of a free dipping programme, farmers should seize the opportunity to dip their animals to control the disease.

Another disease which claimed lives of animals last month was the haemorrhagic septicaemia (HS) and a massive vaccination campaign had been launched.

The department received 73,000 doses of HS vaccine from Lusaka and 50,000 cattle have been vaccinated leaving a balance of 23,000 animals which are expected to be vaccinated this month.

Dysentery Outbreak in Nabwalya

MB2109053092D Lusaka TIMES OF ZAMBIA
in English 31 Aug 92 p 1

[Editorial Report] A dysentery outbreak in Nabwalya area of Mpika has claimed over 30 lives in two weeks. Northern Province Minister Mr. Daniel Kapapa said from Kasama yesterday the only thing that hindered the medical personnel from doing their work was the poor state of the roads.

CAMBODIA

Cholera Kills 33 in Kampot Province

BK0509133492 Phnom Penh SPK in French 1107 GMT 5 Sep 92

[Text] Phnom Penh 5 September (SPK)—Cholera infected nearly 470 people this rainy season, and killed 33 villagers at Kon Sat and Trapeang Pring Communes in Kampot District of Kampot Province.

In the same period, 120 inhabitants in the districts of Chum Kiri, Chhuk, Dang Tong, and [words indistinct] came down with malaria but none died.

Local health workers, in close cooperation with the Health Ministry and the organizations of Medecins Sans Frontieres and Medecins du Monde, took a number of measures to reduce the mortality rates and stop the spread of the two diseases.

Over 400 UN Troops Stricken With Malaria

BK1609065092 Hong Kong AFP in English 0616 GMT 16 Sep 92

[Text] Phnom Penh, Sept 16 (AFP)—Malaria is plaguing U.N. peacekeepers in Cambodia, with more than 400 stricken with the tropical disease which has already killed three soldiers, a U.N. spokesman said Wednesday.

In August alone, 385 people—most of them soldiers in rural areas—were reported to have been treated for malaria, and there were about 40 cases in July, spokesman Eric Falt said.

The August figure does not include the French, Indonesian and Uruguayan infantry battalions in three separate areas of Cambodia because they did not report figures to headquarters, Falt said.

A number of troops, including those from Australia and New Zealand, are taking doxycycline as a preventive measure. All Chinese personnel, including a 400-member engineering battalion are taking the drug qinghaosu, increasing the danger that drug-resistant strains of malaria will develop in Cambodia, a malaria expert with the World Health Organization here said.

The spokesman did not say if those afflicted were taking any prophylactics.

Dengue fever, another mosquito-borne disease which can debilitate a victim for up to six weeks, is also on the increase, Falt said.

Three cases were reported in July, and another 15 were reported in August, he said.

Gastroenteritis is plaguing the troops as well, with 344 cases reported in August despite the water-treatment precautions U.N. personnel are advised to employ in Cambodia.

Dengue Fever Kills 7 Children in Kratie Province

BK1608123692 Phnom Penh SPK in English 1103 GMT 16 Aug 92

[Text] Phnom Penh SPK August 16—Seven children have died of dengue fever in the riverine province of Kratie, some 200 km northeast of Phnom Penh, during four months time from April to August.

According to Sun Song, head of the provincial health service, during the period 364 children aged under ten have suffered the infectious disease and the death toll has risen as compared with the last few years.

He said in 1986, 205 cases of dengue were recorded and among them, 15 people eventually died.

Outbreak of Dengue Fever, Cholera

BK2209131692 Phnom Penh SPK in French 1115 GMT 22 Sep 92

[Text] Phnom Penh 22 Sep (SPK)—From the beginning of 1991 to the end of August this year, dengue fever and cholera were on the rise. The areas most affected were Battambang, Kompong Cham, and Kampot provinces, according to the anti-epidemic center in Phnom Penh.

During this period, cholera attacked nearly 1,000 persons causing 75 deaths, while dengue fever affected 1,400 persons, killing 70.

UNICEF and WHO have assisted the Health Ministry and local health services in tracking down and popularizing hygiene measures and distributing medicine.

INDONESIA

Thirty-Seven Die of Malaria in Irian Jaya Village

BK1508090392 Jakarta Radio Republik Indonesia Network in Indonesian 0700 GMT 15 Aug 92

[Text] Thirty-seven residents of Kuamki Lama Village, Fakfak, Irian Jaya have died of malaria. Most of the victims were between one and four years old. Slamet, officer in charge of the prevention of communicable diseases, said in Jayapura that tertian and tropical malaria were prevalent in the village. Malaria continues to haunt the people there, particularly migrants.

SOUTH KOREA

Two Pusan Residents Contract Cholera

SK2309010792 Seoul THE KOREA HERALD in English 23 Sep 92 p 3

[Text] Two cholera patients were found for the first time in Pusan this year.

Quarantine officials in the port city of Pusan, some 430km south of Seoul said that two workers at a precision machinery company were confirmed to have contracted cholera while overseas. The two, whose names were withheld by health officials, returned home Sept. 15 from Jakarta, Indonesia on board Korean Air (KAL) Flight KE628 along with 116 other passengers.

The quarantine officials are also tracing 29 other passengers from the Pusan area to see if they have also contracted cholera. The two are now being treated in exclusion. It is the first time since 1979 that cholera patients have been found in the Pusan area.

LAOS

Typhoid Kills 38 in Houa Phan

BK1009121292 Vientiane KPL in English 0926 GMT
10 Sep 92

[Text] Vientiane, 10 Sep (KPL)—Since June, 38 people have died of typhoid at Phakha-gna, Kang, Phiangsay, and Houai Moun villages, Houa Meuang District, Houa Phan Province.

Following the outbreak of the illness, the district health service has dispatched medical personnel to cope with the spread. Now the illness is under control at three villages. The situation at Houai Moun is not yet (?normal). Here 70 peoples are still falling ill.

Percentage of People Afflicted With Malaria

BK2609053692 Vientiane Vitthayou Hengsat Radio
Network in Lao 0000 GMT 26 Sep 92

[Text] Presently, on average in the Lao People's Democratic Republic between 15 and 18 percent of the Lao population has been afflicted with malaria. This was disclosed by Dr. Khamliang Phonsena, director of the Malaria, Parasitology, and Insects Institute of the Public Health Ministry.

Malaria epidemics each year largely occur in September and October, especially in rural areas where rain water easily accumulates and stagnates in all types of containers, such as animal tracks, tree stumps, and other places where mosquitos are able to breed easily.

In Laos, malaria is the most life-threatening disease, second only to AIDS. However, this disease can be prevented and cured. Because our economy remains underdeveloped, we can prevent this disease by using mosquito nets while sleeping, relocating animal pens away from living quarters, cleaning living areas, and destroying water containers that are a breeding ground for malaria- carrying mosquitos.

High Rate of Malaria Patients Found in Xieng Khouang

BK0810095792 Vientiane Vitthayou Hengsat Radio
Network in Lao 0500 GMT 8 Oct 92

[Text] According to medical reports of hospitals in Pak Gnon, Tha Thom, and Tha Viang areas in Mok Mai District, Xieng Khouang Province, most of the patients admitted to the three hospitals early this year were afflicted with malaria. About 85 percent of more than 1,300 in-patients receiving medical treatment in such hospitals were found to suffer from this disease, while the others suffered from dysentery and diarrhea.

The main cause of the illnesses is that the people living in rural areas are still insufficiently hygienic in their eating and drinking habits and their living quarters are not clean. At the same time, public vaccination efforts are still inadequate.

Pestilence, Livestock Epidemic in Phouvong District

BK2608110492 Vientiane KPL in English 0916 GMT
26 Aug 92

[Text] Vientiane, August 26 (KPL)—Since mid-August, pest plague broke out in Na Seuk village, Phouvong District, Attopeu Province, damaging some five hectares of rice fields out of 100 hectares.

The plague has still spread in the area since the local authorities did not timely report the case to agriculture services of the district and province.

The same source also said that in the same period epidemic also erupted at Vang Gnan village of the same district, killing 10 water buffaloes and cattle. The epidemic is still active and faced with no counter measures from the local veterinary units.

Haemorrhagic Septicemia, Cholera Epidemic in Khammouane Province

BK0509123292 Vientiane KPL in English 0930 GMT
5 Sep 92

[Text] Vientiane, Sept. 5 (KPL)—Over the past eight months of this year, haemorrhagic septicemia and cholera have killed 494 water buffaloes and cattle, over 200 pigs and a number of poultry in Mahasai District, the central Khammouane Province.

In this connection, local veterinarians have given shots of vaccine to 1,000 water buffaloes, 200 cattle, and 5,000 poultry out of the total 76,000.

MALAYSIA**Marang District Declared Dengue Fever Epidemic Area**

*BK2209165292 Kuala Lumpur Radio Malaysia
Network in English 1430 GMT 22 Sep 92*

[Text] The Marang District in Terengganu has been declared a dengue fever epidemic area. Forty-nine cases of dengue fever and one case of dengue hemorrhagic fever were detected in the district since 8 August.

According to Terengganu Medical and Health Services Director, Dr. Abdul Aziz Mahmud, there were no deaths. He said today the first case was detected in Kampung Jerung Sembawang.

He told a news conference in Kuala Terengganu that the department has set up two operations rooms—one at the state health office and the other at the Marang health office—to help contain the epidemic.

Official Warns Against Rabies Epidemic in Perlis

*BK0210124892 Kuala Lumpur Radio Malaysia
Network in English 1330 GMT 1 Oct 92*

[Text] The Veterinary Services Department has confirmed that another person from Kampung Permatang Jejawi, Perlis has contracted rabies, bringing the number of victims to 10. Its director general Datuk Dr. Ahmad Mustapha Bagji said eight sheep in the same area were also infected with the disease. Three of them died three weeks ago. He will be visiting the affected areas in Kampung Padang Bertani, Perlis tomorrow for a first-hand look at the situation.

Speaking in a news conference in Kuala Lumpur, Datuk Dr. Ahmad said he had directed that all leave for the department's staff in Perlis and Kedah be canceled to check the epidemic. Veterinary Services officers in both states have also been directed to carry out operations to inoculate dogs and kill stray dogs. He urged people bitten by dogs, especially in Perlis and Malaysia-Thailand border areas, to report to the department and obtain medical treatment.

SINGAPORE**Doctors Discover First Cases of Hepatitis E Virus**

*BK1609142892 Singapore Singapore Broadcasting
Corporation in English 1400 GMT 16 Sep 92*

[Text] Doctors have for the first time detected the presence of the Hepatitis E virus in three Singaporeans. The principal researcher from the Department of Clinical Research in the Singapore General Hospital, Professor Oon Chong Jin, told SBC [Singapore Broadcasting Corporation] that further research is going on to detect the extent of the problem. He said the virus is transmitted by the mouth and it is related to bad hygiene like eating dirty food.

A total of 87 adults were detected during the last two months. The virus may be present in people with acute or chronic liver disease as well as those who do not show any symptoms of liver disease.

The Hepatitis E virus has been found in countries like Bangladesh, Burma, Mexico and Egypt.

Environment Ministry Reports More Hepatitis 'A' Cases

*BK0110115092 Singapore Singapore Broadcasting
Corporation in English 1100 GMT 1 Oct 92*

[Text] The Environment Ministry said that there is a sudden increase in the number of cases of Hepatitis 'A' reported in the past three weeks. Fifty cases were reported and an average of two cases per week were (?reported) before that.

The ministry said investigations show that most of those who were afflicted had eaten raw or partially cooked cockles and oysters. It said that cockles and oysters grown and harvested in polluted waters can be contaminated with the Hepatitis 'A' virus.

The virus cannot be safely destroyed if the cockles and oysters are partially cooked. The ministry said it is not advisable to eat cockles and oysters unless they are thoroughly cooked.

Anyone who has developed a fever with strong [word indistinct] should seek immediate medical attention.

VIETNAM**More Cases of Hemorrhagic Fever in Soc Trang**

*BK1808143092 Hanoi Vietnam Television Network
in Vietnamese 1200 GMT 9 Aug 92*

[Text] In June alone, as many as 230 cases of hemorrhagic fever were reported in Soc Trang Province. The disease has developed into an epidemic at Vinh Vien Hamlet, Vinh Qui village, Thanh Tri District. The same alarming situation has also been reported at Hoa Dao Hamlet, Ngoc Qui village; Vinh Binh hamlet, Thon Duong village, and Hoa Tho, Ngoc Long village of My Xuyen District. On the average, more than 30 people at each village have contracted the disease.

To cope with this situation, local public healthcare services have promptly dispatched cadres to the affected areas to take care of emergency cases. Along with sending physicians and medical assistants to dispensaries to cope with emergency cases, the Soc Trang provincial public healthcare service has sent cadres to the above-mentioned areas to show local compatriots how to eradicate mosquitoes and larvae, which constitute the main causes of hemorrhagic fever. At Vinh Vien hamlet, thanks to the concern of the local public healthcare service and administration, the disease had been eliminated in just four days before it could spread to adjacent hamlets.

More than 560 cases of hemorrhagic fever have been detected in Soc Trang Province since the beginning of this year. Eight fatalities have also been reported. The number of people seriously affected by hemorrhagic fever this year has increased by 25 percent compared with last year. So far, the disease has been contained. However, Soc Trang Province is continuing to carry on the anti-hemorrhagic fever campaign in the rainy season.

Fewer Malaria Victims in Nam Ha Province

BK0409125892 Hanoi Voice of Vietnam Network in Vietnamese 2300 GMT 30 Aug 92

[Text] Due to the strengthening of the epidemic controlling system and the supply of Chloroquine, Quinine, and (Aphecetalene) down to grass-root levels, so far, the Nam Ha Malaria, Parasite, and Insect Center has successfully treated nearly 9,000 people infected with malaria. Moreover, the center has also tested more than 23,000 people and discovered 500 malaria-parasite carrying people, including people with acute malaria parasites. These people were infected with the parasite while they worked on gold and gem stone exploration sites. Because of these efforts, the number of malaria-infected people has been decreased by 30 percent compared to the same period last year and the death rate from the disease decreased by 22 percent.

At present, the Nam Ha Malaria, Parasite, and Insect Center is continuing to develop its epidemic-control system and planning to decrease the epidemic to its lowest level in the entire province.

Government Carries Out Anti-Malaria Campaign

BK1809152192 Hanoi VNA in English 1351 GMT 18 Sep 92

[Text] Hanoi VNA Sep 18—Mobile medical teams armed with mosquito-killing agents and malaria drugs have been sent in concert to each commune, especially targetted areas, in a follow-up effort to control Malaria on the Central Highlands this year.

Beside treating malaria patients, spraying mosquito killer and administering anti-malaria tablets and ampoules the anti-malaria teams are to help strengthen the grassroots medical system which will continue their work when they have gone.

This time, attention was paid particularly to remote areas where the job has not been properly done so far, due to difficulties in transport and lack of coordination among grassroots medical units. The government has

allocated a further 600 million dong for anti-malaria activities in Gia Lai, where malaria infected over 30,000 people and caused 250 deaths in the first eight months of this year. Another 29 million dong worth of malaria drugs have also been sent from the northern province of Hai Hung to help protect new settlers in Darlac and Gia Lai from the disease.

'Great Efforts' Made To Remedy Malaria Situation

BK0810065792 Hanoi VNA in English 0628 GMT 8 Oct 92

[Text] Hanoi VNA October 8—So far this year, the number of people dying of malaria in the central highlands has accounted for half the toll from this disease in the whole contry.

Great efforts have been made to remedy the situation. Besides 4.4 billion dong invested by the government, the region has been given 1.8 billion dong by the Health Ministry to spend on chemicals and specialised medicines. Nearly 4,000 medical workers from the Central Highlands College, the Central Highlands Institute of Hygiene and Epidemiology and other local medical stations have been sent to all hamlets and communes to engage in the fight against malaria.

The provincial people's committees of the four Central Highlands provinces have (?distributed) 600 million dong to people spraying mosquito repellent, treating mosquito nets and mobilising local people to prevent malaria.

More than 1,000 workers now building the 500-kilovolt trans-Vietnam power line in the three provinces of Kon Tum, Gia Lai and Darlac have been regularly supplied with malaria drugs, and 95 percent of them have been provided with nets already treated with mosquito-killing agents.

As a result of this effort, only 10 percent of the workers have been affected by malaria and there are no cases of severe malaria.

Malaria has also shown its ugly face in Nghia Dan district, Nghe An central province, where more than 5,000 people were struck by the disease in the first half of this year, 700 more than in the same period last year.

The main reason for this situation is the lack of antimalaria drugs and mosquito repellent. Of the total of 1,200 kg of ddt, a mosquito killing agent, required, only 100 kg have been supplied while the district has no mosquito repellent for treatment of nets. Mai Nghia village alone has 476 patients untreated because of lack of malaria drugs.

BULGARIA**Experts Claim Cholera Epidemic Threatens
Burgas***AU1009102792 Sofia BTA in English 1909 GMT
9 Sep 92*

[Text] Burgas, September 9 (BTA)—The cholera epidemic in Romania and Russia threatens Bulgaria as well, local epidemiology experts claim. This statement has been confirmed by several tests conducted by the Burgas-based Inspectorate of Hygiene and Epidemiology.

Choleroïd vibriões were found in 46 samples of food, water and air. Though not of the classic cholera type, these vibriões can also cause the disease, experts believe. The most alarming fact, however, is that most of the samples which tested positive were taken from beaches along the southern Black Sea coast.

The results were alarmingly confirmed by tests conducted in students' camps and camping sites in the area. A joint survey will be conducted by the Inspectorate of Hygiene and Epidemiology and the Water Supply and Sewerage Department in Burgas. The waste waters in practically all population centres along the southern Black Sea coast will be tested. The Inspectorate of Hygiene and Epidemiology gives its assurance that in case the results prove dangerous, the endangered areas will be urgently disinfected.

ROMANIA**Health Ministry Denies Cholera Rumors***AU1009183092 Bucharest ROMPRES in English
1715 GMT 10 Sep 92*

[Text] Bucharest ROMPRES, 10/9/1992—About the rumors related to the appearance of cases of cholera in Romania, an official of the leadership of the Romanian Health Ministry pointed out to a ROMPRES editor that "except that singular case which was registered in the Danube Delta, when the sick person received the appropriate care and is now in good health again, no other case has been registered, neither in the County of Tulcea (county comprising the Danube Delta—editorial note) nor in any other county."

YUGOSLAVIA**Seven Hundred Infected with Enterocolitis in Stari Grad***LD0109175292 Zagreb Radio Croatia Network
in Serbo-Croatian 1500 GMT 1 Sep 92*

[Report from Sarajevo by Slavko Rako]

[Excerpts] [Passage omitted] The crisis health service headquarters reports that from 1100 yesterday until 1100 today 20 people were killed and 218 wounded in

nine of Bosnia-Herzegovina's municipalities. There were 13 people killed and 119 wounded in Sarajevo. [Passage omitted]

This is the 25th day without electricity supplies. There are not even sporadic water supplies like a few days ago. Since yesterday there has not been any bread. Under these conditions, epidemics are spreading. There are now about 700 people infected with enterocolitis just in Stari Grad. [passage omitted]

Enterocolitis Epidemicis 'Still Raging'*LD0509141292 Sarajevo Radio Bosnia-Herzegovina
Network in Serbo-Croatian 1300 GMT 5 Sep 92*

[Excerpt] The republican headquarters for health and social security of Bosnia-Herzegovina has reported that the epidemic of enterocolitis is still raging in the republic. [passage omitted including indistinct portions on water and electricity shortages]

Contaminated Water Causes Gastro-Intestinal Ailments*AU0709130892 Paris AFP in English 1224 GMT
7 Sep 92*

[Text] Sarajevo, Sept 7 (AFP)—Contaminated water, compounded by malnutrition and cold, is provoking an epidemic of gastrointestinal and other disorders that local health officials say they have not seen before.

"We are receiving an average of 75 new cases of anthrocolitis a day, more than 1,520 since August 19," said Doctor Sukrija Celik, chief of epidemiology at the Kosevo Hospital complex.

"I have no doubt there are at least four or five times that many that are not being reported because people are too sick or too weak or do not have transportation to come to the hospital," he said.

Celik said most of the patients are children, whose immune systems are already severely weakened by malnutrition during the five months of the Serbian siege of the Bosnian capital.

He said polluted water was also causing an unusually high incidence of dysentery.

There have been 30 cases of Hepatitis-A since the beginning of September, and at least two cases of typhoid and one of tuberculosis, he said.

"This is a classic epidemic," said Celik, but he added that the hospital did not immediately intend to ask for help from the World Health Organization of the U.S. Center for Disease Control in Atlanta, Georgia.

"We can manage with the staff we have," he said. "What we need is technical assistance to restore the electricity. With electricity, we can get the water system functioning again."

Doctor Fahrudin Kulenovic, general manager of public health in Sarajevo, said the problem of polluted water stemmed from shelling which had broken sewage mains and allowed raw sewage to seep into well water.

The neighborhood wells, he said, are being used by people who are cut off from public water and have no alternative. The city's main reservoirs have been damaged by shells and are inoperative.

"We try to distribute chlorine to the neighborhoods with instructions so they can purify the well water before they use it," said Kulenovic. "But it is difficult. People don't understand the problems."

Weather is compounding the health problems, he said.

There are still two weeks left of summer, yet the hills surrounding the city are laced with snow and a crisp winter chill cuts the air.

More than half the homes have been damaged by shelling. There is no heat. Unbroken windows are rare.

There will be little shelter from the severe coming winter, all of which, said Kulenovic, will exacerbate the city's health problems.

At Kosevo hospital, the modern, computerized laundry has been stilled for a month by lack of electricity. Power produced by generators is conserved for surgery, deliveries and other emergencies.

"Our nurses are washing the linen by hand," said Celik. "When there is enough power, they can sterilize it. If not, they make do."

Dailies Warn of Threatening Wave of Infectious Diseases

*LD1609124792 Belgrade TANJUG in English
1014 GMT 14 Sep 92*

[Text] Belgrade, September 14 (TANJUG)—Serbia is threatened with epidemics of infectious diseases because of alarming shortages of drugs and articles for personal hygiene, the Belgrade daily BORBA said on Monday.

Three cases of tetanus were registered at the clinic for infectious diseases in Belgrade in just one week. The patients were treated with bovine serum, which has long since been replaced with more contemporary methods.

In addition to the anti-tetanus serum, Belgrade's only clinic for infectious diseases lacks also many antibiotics, disinfectants and insecticides, cotton wool and gauze, BORBA said.

The Belgrade daily POLITIKA warned that hospitals in Serbia would be faced with severe shortages of vital medicines, medical material, and fuel this autumn and winter.

"It will be a national disaster if we have no heating fuel, and we have no other option for heating. I hope that this

will not happen and that we shall be able to provide room temperatures of 24-26 degrees (centigrade) for the babies this year as usual," said Mihailo Leposavic, head of the maternity ward of Belgrade's city hospital.

Federal Health Minister Branko Radovic last week appealed to the World Health Organization (WHO) to send to Yugoslavia aid in medicines and baby food.

The situation in the area of the health services deteriorated rapidly after May 30, when the United Nations (U.N.) Security Council clamped political and economic sanctions on the Federal Republic of Yugoslavia and its members of Serbia and Montenegro.

Although deliveries of medical supplies are exempt from the sanctions, some foreign partners are not delivering requested goods, even the ones that have been paid for or contracted. Others offer expensive semi-manufactures or finished products instead of the contracted raw materials. Transports of medical goods are also often hampered, warned the federal health minister in his appeal.

Over 6,000 Registered Cases of Enterocolitis

*AU2909152292 Sarajevo Radio Bosnia-Herzegovina
Network in Serbo-Croatian 1400 GMT 29 Sep 92*

[Text] The Republican Headquarters for Health and Social Security of Bosnia-Herzegovina reports that the hygienic and epidemiological situation is still dangerous, although the number of reported cases of enterocolitis is gradually declining. So far, 6,562 cases of enterocolitis have been registered in Bosnia-Herzegovina, 3,084 of them in Sarajevo. Citizens are warned to take extreme precautions with water and food.

The shortages of medicine and sanitary materials in Bosnia-Herzegovina are becoming increasingly pronounced. The worst shortages are reported in Jajce, Visegrad, Jablanica, Zepa, Maglaj, Tesanj and Zenica.

The most needed sanitary material is gauze, bandages, and fixation instruments [vanjski fiksator], and also every kind of surgical equipment is needed. As for medicine, infusion solutions are desperately needed, as are antibiotics, analgesics, disinfection agents, anesthetics, cardio-tonics, and antihypertensives.

[Word indistinct] oxygen, and oil for aggregates are urgently needed in Sarajevo.

According to the latest information from Jajce, Tesanj, Maglaj, Srebrenica, Tuzla, Travnik, Zenica and Sarajevo, 32 people have been killed, and 212 wounded in the last 24 hours, of which 15 killed and 90 wounded were in Sarajevo.

Enterocolitis Epidemic Spreading

*LD0310173692 Zagreb Radio Croatia Network
in Serbo-Croatian 1600 GMT 3 Oct 92*

[Text] [Passage omitted] An epidemic of enterocolitis with dysentery is still spreading in Bosnia-Herzegovina, and 6,715 diseased people have been registered so far, 3,173 of them in Sarajevo.

Gorazde Mayor Says Five Thousand Dead, Many Starving

*AU0610130492 Vienna Oesterreich Eins Radio Network
in German 1100 GMT 6 Oct 92*

[Werner Heritsch report on radio interview with Mayor of Gorazde Hadzi Effendic, in Gorazde; date not given; Effendic speaks in Serbo-Croatian with superimposed German translation—recorded]

[Excerpt] [Passage omitted] **Effendic:** Basically, the territory of Gorazde is free. Yet the town is hermetically sealed. The aggressor continues to control the surrounding villages and beleaguers the town and the refugees. The situation here is very dramatic. Food is very scarce. Nearly 35,000 refugees have arrived here. The situation is critical. It will not take long until we all starve. As far as the military situation is concerned, we

are holding our positions. But this is like a large concentration camp. There is a lack of everything one needs to survive.

Heritsch: Over 5,000 people have died in the fighting in Gorazde, Hadzi Effendic stressed. Over 10,000 have been injured. There is hardly any medical care. The hygiene situation is very bad, too. Is there still hope?

Effendic: The United Nations is the only hope. A relief convoy protected by the United Nations is the only way to help us. If this is not possible, we have no chance of surviving here. Then we will all die. Already at this point, many people are sick and weak, and many are starving.

Infectious Stomach Diseases on Increase

*AU0710140392 Sarajevo Radio Sarajevo Network
in Serbo-Croatian 1100 GMT 7 Oct 92*

[Excerpt] A report prepared by Jajce Television journalists Amih Hadziosmanovic and Gordana Ristovic says that "the aggressor's artillery is doing its dirty work, shelling civilian targets in the town while there have been no changes or attempts at infantry breakthroughs at the front lines around Jajce." Finally, the report says that "Jajce still has no electricity and water, and the number of cases of infectious stomach diseases is on the increase." [Passage omitted]

REGIONAL AFFAIRS

Total of 255 Cholera Deaths

PA05091515920 Panama City ACAN in Spanish
2234 GMT 2 Sep 92

[Editorial Report] The regional office of the Pan American Health Organization, headquartered in San Jose, Costa Rica, has reported that during the first six months of 1992, the number of people who have died of cholera in Central America is twice the casualty list of 1991. According to this information, 255 persons have died of cholera this year.

ARGENTINA

Meningitis Outbreak

PY2409162392A Buenos Aires BUENOS AIRES
HERALD, 23 Sep 92 p 11

[Editorial Report] The Buenos Aires Public Health Department said on 22 September there have already been 504 cases of meningitis in this province this year, of which 21 were fatal. The outbreak has affected infants, adolescents, and adults. The Health Department also said that 161 of the cases are of the meningococcal variety. Local health authorities insist that the number of cases does not indicate an epidemic.

BELIZE

Officials Confirm Case of Cholera in Cayo District

FL1908171992 Bridgetown CANA in English
1428 GMT 19 Aug 92

[Text] Belmopan, Belize, Aug 19, CANA—Belizean health authorities have confirmed the first case of cholera in the western Cayo district bordering Guatemala. The patient, a man from the village of Santa Familia, was admitted to hospital last Saturday. He is reported to have been successfully treated and is expected to be sent home within the next two days.

This is potentially a more serious outbreak than previous cases in the southern district of Toledo as Cayo is more heavily populated with several large towns and has workers who commute daily to Belize City. The area also has the largest number of Central American refugees and economic migrants, and many of the locals have daily contacts across the border, officially at the Melchor de Mencos border post and unofficially via unmarked paths through the jungle.

Director of health services, Dr. Errol Vanzie, said the country's only pathology laboratory in Belize City had been working throughout the weekend and all cases of diarrhoea reported at health centres and hospitals nationwide were being tested for cholera. Dr. Vanzie

said medical teams sent in to deal with last week's outbreak of cholera in the Toledo district, had now been withdrawn.

Three new cases were confirmed last Friday bringing to 12 the number of cases in the south since a fiesta was held in the village of Augacate which was attended by Guatemalan visitors. Dr. Vanzie said all the cases have been treated and the patients have recovered. He said the medical teams returned to the town of Punta Gorda after training community health workers in the affected villages of Augacate, Jalacte, San Benito Poite, and Jordon.

Carec Monitors Cholera Outbreak in Belize

FL1908231692 Bridgetown CANA in English
2123 GMT 19 Aug 92

[Text] Port-of-Spain, Trinidad, Aug 19, CANA—The Caribbean Epidemiology Centre (Carec) said on Wednesday that it was monitoring the cholera outbreak in Belize.

"We're in contact with their health ministry and the Pan American Health Organisation (PAHO) in Belize and we have been receiving reports on the outbreak," said Dr. Parimi Prabhakar, a medical microbiologist at Carec.

Stating that the cholera case in Belize was on the border of Guatemala, Dr. Prabhakar said it was not necessarily a threat to the English-speaking Caribbean. But he quickly added, "But we have to be on constant alert and observe all health procedures." Belizean health authorities confirmed the first case of cholera in the heavily populated western Cayo district. Some 12 cases of cholera were also confirmed in the southern district of Toledo.

The microbiologist said the centre plans to provide some help to Belize and was awaiting the return of epidemiologist Dr. James Hospedales to work, following a vehicular accident over the weekend.

Dr. Prabhakar said Carec was also monitoring cholera cases in Venezuela and the Spanish-speaking island Margarita. He said because of constant traffic between Trinidad and Tobago and Venezuela and Margarita, Carec was looking at developments in the South American region very closely. The Carec official said there was also constant surveillance in Guyana and Suriname.

Health Director: Country Faces 'Serious Cholera Epidemic'

FL1309211892 Bridgetown CANA in English
2028 GMT 13 Sep 92

[Text] Belmopan, Belize, Sept 13, CANA—Belize health authorities say the number of confirmed cholera cases in the country has risen by six over the past week to 35.

Dr. Gregory Castillo, the acting director of health services, said all the new cases had shown up in the same areas as earlier cases, that is near creeks and rivers in the

southern Toledo and western Cayo districts which are close to the border with Guatemala.

Dr. Castillo said all the new patients had been responding to treatment and there had been no more deaths since a man from the western village of Santa Familia died two weeks ago.

Speaking to the Broadcasting Corporation of Belize, he said the country was faced with what he described as "a serious cholera epidemic." Dr. Castillo said health authorities were having difficulty getting their prevention message across to people, especially in rural areas. They were not realising the intensity of the cholera disease and therefore the number of cases were increasing, he said.

Country's First Cholera Death Registered

*FL2208021092 Bridgetown CANA in English
2200 GMT 21 Aug 92*

[Text] Belize City, Aug 21, CANA—Health officials in Belize have confirmed the country's first death from cholera.

Farmer Agapito Puk, 56, from the village of Santa Familia in the Western Cayo District died in the San Ignacio Hospital, Wednesday morning.

Puk, a resident of Santa Familia village, was the second patient in the area to contract the disease. The first patient was treated and has recovered.

Citrus Growers Fear Tristeza Virus Infestation

*FL2409185292 Bridgetown CANA in English
1627 GMT 24 Sep 92*

[Article by Howard Benson]

[Text] Belize City, Sept 24, CANA - There's growing concern in Belize about the future of the citrus industry following revelations that the potentially lethal citrus tristeza virus has been detected in the country's main citrus growing areas.

The Ministry of Agriculture and Fisheries put out a radio warning this week to the general public, and citrus growers in particular, saying they could not give guarantees that available citrus seedlings were 100 percent free of the virus, which can cause rapid decline of trees and their fruit.

Chief Agriculture Officer Eulalio Garcia said a programme is being developed to counteract the virus which is carried by a small fly or aphid and which has been spreading northwards from South America into Central America.

Garcia said the virus had been detected in Belize during a survey from March to June in the Stann Creek, Cayo and Toledo districts.

He said his ministry will be promoting publicity programmes, to get citrus growers to cooperate with the certification programmes of nurseries and he called on farmers to implement integrated pest management actions to prevent the spread of the virus.

Principal Agricultural Officer Joseph Smith told the Caribbean News Agency (CANA), that a decision to publicise the threat from the virus had been made following a meeting last week in Venezuela at which government officials and citrus growers and processors had heard from specialists from Brazil, Spain, Israel and the United States.

Smith said that tristeza virus had been detected in citrus root stock which had been imported. So far the pest carrier had not been found but was "fast approaching" in a manner similar to the Africanised bee which has already swept through the region.

"Our problem is that the sour orange root stock is about 90 percent susceptible to the citrus tristeza virus. Consequently we expect that if it should come in the next five years we would not have any more citrus," said Smith.

"We don't want to be caught off guard so we need to have a policy and a mechanism in place whereby we will be able to reduce our losses," he said.

Smith said a mild strain of the virus was already in Belize because in the past people had brought in materials from abroad, whether legally or illegally, that had been infected.

The mild strain could become virulent at certain times of year depending on the weather conditions, he said.

Several ways of fighting the virus are being considered.

These include the introduction of a special virus from the United States which would act to immunise the trees; a cross protection programme where resistant hybrid types of root stock would be budded onto existing trees; or the complete eradication of the existing orchards and the phased introduction of plants with tristeza resistant root stock.

Smith said the government was waiting for a detailed report from the Venezuela meeting before deciding on which measures to adopt.

He said the Caribbean Development Bank had committed 93,000 dollars to Belize (one Bze dollar ; 50 US cents) for research into the virus, an amount which was matched by the government. A consultant is being hired and will develop a strategy to combat the virus along with a Belizean counterpart.

Smith said that the government, the Citrus Growers Association, the two big processors and several big producers, were all concerned about the tristeza threat.

BOLIVIA

Over 19,000 Cholera Cases

PY2409162392C La Paz LA RAZON in Spanish
9 Sep 92 p B6

[Editorial Report] The National Epidemiology Directorate has reported 19,934 cholera cases in the country up to August of this year. This figure includes both confirmed and probable cases. The report adds that 339 people have died and 9,103 were hospitalized. Santa Cruz Department is the most affected, with 6,600 confirmed cases, 9,330 probable cases, 82 deaths, and 3,413 hospitalized. In Cochabamba there were 377 confirmed cases, 3,718 probable cases, and 75 deaths. In Chuquisaca there were 155 confirmed cases, 1,599 probable cases, and 37 deaths. In Tarija there were 99 confirmed cases, 1,125 probable cases, and 65 deaths. In Beni Department there were 108 confirmed cases, 699 probable cases, and four deaths. In Tupiza there were 86 confirmed cases, 366 probable cases, and four deaths. In La Paz Department there were 119 confirmed cases, 206 probable cases, and 30 deaths.

Cholera in Chapare Region

PY2409162392B La Paz Radio Fides Network
in Spanish 1100 GMT 19 Sep 92

[Editorial Report] Cholera Cases in Chapare—A total of 60 cholera cases, including eight deaths, have been reported in the Chapare region in Cochabamba Department.

BRAZIL

Cholera Deaths Outnumber Those in Peru

92WE0544B Sao Paulo O ESTADO DE SAO PAULO
in Portuguese 29 Jun 92 p 11

[Report by Sonia Silva]

[Text] Brasilia—The percentage of deaths from cholera in Brazil exceeds internationally acceptable levels. "Our indices are relatively high," admits epidemiologist Luiza de Paiva, coordinator of the National Health Foundation's (FNS) Waterborne Diseases Control Program.

The latest Ministry of Health bulletin indicates that 1.29 of every 100 cholera victims died of the disease. The expectation worldwide is less than 1 percent. In Peru, where the epidemic now seems to have stabilized, the mortality rate was 0.3 percent in May.

According to Luiza de Paiva, the difficulty of obtaining medical care is one of the factors responsible for the high figures in Brazil. The Anticholera Sanitation Program in the Northeast is expected to be of great help in reducing diarrheal diseases, including infectious ones, that kill thousands of children every year.

Minister of Health Adib Jatene is of the opinion that "it was cholera that called attention to the gravity of the volume of deaths from diarrheal diseases."

Estimates

"The trend is for the mortality coefficient to decline," insists Luiza de Paiva. The latest ministry bulletin confirms 13,205 cases of cholera, with 170 deaths. "In numerical terms, the cases and deaths are far below initial estimates, and the federal and state governments have been trying to overcome deficiencies," de Paiva said.

"We know there are cases where the health care network is not always prepared," the expert continued, recalling that one of the alternatives found for providing speedy assistance was the installation of Cholera Treatment Units. "We give the local clinics, hybrid units, or hospitals the infrastructure they need to care for even serious cases," she explained.

"Mortality is always higher during the early stages of an epidemic, but deaths decline after the government and the public take action to fight the problem," de Paiva argued. According to her, this is why the latest bulletin showed a mortality coefficient in excess of 2 percent for Bahia State. "In the bulletin that came out in early June, Bahia had a mortality coefficient of 4 percent, but the percentage has been falling as campaigns are launched to locate and promptly treat patients in the early stages of the illness," she argued.

Figures from the latest bulletin also show rates above 1 percent for the following states: Amazonas, Para, and Amapa in the North; and Ceara, Rio Grande do Norte, Paraiba, and Pernambuco in the Northeast. "The number of cases is small, which increases the mortality rate obtained by comparing the number of cases with the number of deaths," Luiza de Paiva also pointed out.

Sanitation

De Paiva believes that the Emergency Sanitation Program in the Northeast, which calls for small works projects to benefit more than 16 million Northeasterners, will cut the overall incidence of waterborne diseases and so there will be a decline in deaths in general. "There is no way to measure it, but we will certainly see a significant drop in diarrheal diseases," she stated.

According to Sadi Coutinho Filho, an engineer with FNS Office of Sanitation Coordination, implementation of the plan began after the foundation released 20 billion cruzeiros in funding. In all, the Ministries of Health and Social Action and the Regional Development Secretariat will invest 70 percent of the 242 billion cruzeiros, and the nine Northeastern states, plus Minas Gerais, will furnish the other 30 percent.

"We have already received reports from the North, where cholera entered Brazil, saying that the steps taken

to improve the water supply and sewer system have reduced the incidence of diarrheal disease," explained Engineer Coutinho, who does not yet have a statistical analysis to substantiate his statement.

Cholera Cases Increase

PY2409162392D Brasilia Voz do Brasil Network in Portuguese 2200 GMT 18 Sep 92

[Editorial Report]—The Health Ministry bulletin has reported 38 suspected cholera cases in Sao Paulo. Mato Grosso do Sul State has reported 104 suspected cholera cases. The number of suspected cholera cases in the southeastern and central-western regions now increased to 1,359. Nonetheless, only 14 cholera cases have been confirmed in the region. Last week 821 more cholera cases were registered in the northeastern region, three of them fatal. The number of cases registered in the region since the beginning of the year now totals 20,564. Also last week, 29 new cholera cases were registered in Para and Amapa States, increasing the total number there to 2,512. The only fatal case registered in the northern region last week occurred in Para State. The number of cholera cases countrywide now totals 23,090, 268 of which have proved fatal. So far the illness has affected 445 counties countrywide.

CHILE

Kawasaki Disease Reported

PY1709170292C Santiago Television Nacional de Chile Imagen Internacional in Spanish 0000 GMT 15 Sep 92

[Editorial Report] Three children have died of an unusual illness known as Kawasaki disease. This disease was named after the doctor who discovered it, Dr. Kawasaki Tomisaki who is now in Chile, where 200 cases of the illness have already been detected. He has come to teach Chilean doctors about the disease.

COSTA RICA

Increase in Malaria Cases

PA0509151592A Hamburg DPA in Spanish 2056 GMT 4 Sep 92

[Editorial Report] Costa Rican health authorities are concerned over the increase in malaria cases in the country. According to Health Ministry information, so far this year 4,626 malaria cases have been reported. The area most affected is the Atlantic region.

DOMINICAN REPUBLIC

Sixty Cases of Typhoid Fever

FL2109152692 Santo Domingo Cadena de Noticias in Spanish 1000 GMT 21 Sep 92

[Text] At least 60 typhoid fever cases have been detected in La Victoria. Conjunctivitis is also affecting La Victoria residents. The La Victoria Development Committee said that typhoid fever cases have increased in the past two months in this community. The situation has been confirmed by the doctor at the local health center branch.

The illness is attributed to the consumption of contaminated water supplied by the Santo Domingo Aqueduct and Sewer Corporation. The report says that the water is contaminated with fecal material and salmonella. It indicates that 90 percent of the patients treated in August suffered from salmonellosis.

EL SALVADOR

Over 8,000 Cholera Cases

PA0509151592B Mexico City NOTIMEX in Spanish 0102 GMT 1 Sep 92

[Editorial Report] Health Minister Lisandro Vasquez reported on 31 August that at least 72 persons have died of cholera and 8,000 have had the disease since the virus appeared in El Salvador more than a year ago.

GUATEMALA

Cholera Epidemic Called 'National Catastrophe'

92WE0609A Guatemala City SIGLO VEINTIUNO in Spanish 7 Jul 92 p 14

[Article by Tulio Juarez]

[Excerpt] The 8,000 cholera cases detected in the first six months of 1992 alone equal the total number of patients treated in all of 1991 and are clear evidence of epidemic spread.

Public Health and Social Assistance officials are convinced of the critical nature of the situation and of the danger in which it places all Guatemalans, especially in rural areas because of their remote and inaccessible locations.

They even compare the emergency with the situation in which we lived following the earthquake of 4 February 1976, which is to say, another national catastrophe, except that this one is a matter of public health.

Vibrio cholerae has managed to occupy the country, and high ministerial officials recognize that fact, among them Vice Minister of Public Health Thelma Duarte de Morales.

The director general of hospitals, Leon Arango Escobar, and the chief of health services, Zoel Leonardo, also express their concerns and apprehensions because the disease is spreading like a train of gunpowder.

Vice Minister de Morales believes that this is a situation that involves each and every Guatemalan and, especially, medical and paramedical personnel.

Therefore, now that doctors and the rest of the hospital bureaucracy are organizing to obtain increased benefits, Dr. de Morales emphasizes one basic point:

"They cannot turn their backs on the neediest elements of the population that they say they are defending. This is not an institutional problem or only a problem of government: It is like an earthquake...."

She describes the existing situation as an authentic national tragedy that can strike any family at any moment, without regard to race, sex, age, or economic condition.

She is completely convinced that the line the hospital unions are following regarding the situation facing the country because of cholera does not stray from reality.

Also, the health authorities have distributed sufficient medications in the interior of the country, but they emphasize that the principal source of the infection and spread of the disease must be dealt with: the water.

Dr. de Morales explained that not only is the bacteria-contaminated water lethal, but so are vegetables and edibles gathered in contaminated rivers and lakes.

She also says that more than 100,000 inhabitants of the capital are at high risk, especially those living in settlements and other "misery villages," because they do not use chlorinated water.

As a result, the Permanent Committee for Water Control and Sanitation (Copecas), whose sections conduct bacteriological testing, has gone to work.

Copecas cooperates with the National Institute of Municipal Development regarding water quality, when the presence of fecal wastes, cholera, or other agents has been established.

Of all the cholera cases reported throughout the nation, 18 percent are concentrated in Guatemala City alone, a rate considered low because of the availability of medical and hospital services.

The director general of health services, Dr. Leonardo, thinks that the prognosis for the cholera curve is completely negative, especially during the next two months.

"The curve tends to worsen in July because we have a market at La Terminal, in Zone 4, which is the principal focal point for the contagion and spread of *Vibrio cholerae*," he said.

The problem stems from the distribution of foodstuffs without sanitary controls and the proliferation of street vendors, "but the city administration does not try to prevent these practices."

To give an idea of the gravity of the situation, Leonardo said, "nationwide, the crisis will worsen in July and August, with not less than a thousand cases a week."

He predicts that this will happen if the people do not take their own measures of sanitary self-defense, such as boiling water and not using water from questionable sources.

Making the problem more serious, he said, is the fact that most of the 17 townships in the Department of Guatemala are infected by cholera, to a greater or lesser degree.

"All of the poorer areas are at grave risk, and there are more than 100,000 persons who are in danger of contracting the disease, although there are some places or colonies that receive city water," he said.

Leonardo emphasized on one essential aspect: The capital faces the problem of heavy migration by persons from infected locations, who come to stay or are just passing through.

For example, Escuintla is one of the focal points of propagation because of the migrant workers who travel from there, through La Terminal, in Zone 4, to their homes in the high plateau.

They perform their physical necessities in the street and eat contaminated food, which converts them into human reservoirs of cholera, through their digestive tracts and feces.

The principal center in the capital for the dissemination of the disease is undoubtedly the market-bus terminal, as are the other cantonal centers of commerce and vehicle transport. [passage omitted]

Confirmed Cholera Cases Total 3,964; 255 Dead

92WE0696A Guatemala City EL GRAFICO in Spanish
26 Aug 92 p 6

[Text] From the beginning of April 1992, when the outbreak began, to 15 August, confirmed cases of cholera have totaled almost 4,000. This was stated by the Ministry of Public Health. The exact number of confirmed cases of the disease is 3,964.

The number of suspected cases recorded during the same period is 17,817. However, 7,190 persons are listed as having recovered. The total number of persons who have died of cholera is 255.

The Ministry of Public Health has expressed the fear that during October and November there may be another outbreak of cholera that will be as severe as the one in April. This reflects the fact that persons who have

suffered from cholera only have six months of protection against it. After that, they may contract the disease again.

In connection with this, the Ministry said that persons who have had cholera are being checked to prevent them from contracting it again. Contracting cholera again could be fatal to them if they are not treated properly.

'White Fly' Attacks Tomato Crop

92WE0673A Guatemala City PRENSA LIBRE
in Spanish 27 Jun 92 p 44

[[Text] Salama, Baja Verapaz. The white fly plague is causing enormous damage to tomato farms in this region, to the extent that many growers have had to abandon their crops because they do not have suitable means for combatting it, according to growers.

Tomatoes are a basic part of the Guatemalan diet, they added, and they have been cultivated extensively in the irrigated and semi-irrigated areas of Baja Verapaz, but production has greatly declined recently.

The white fly transmits a viral disease that causes tomato plants and other crops to shrivel, causing many growers to increase their expenses for the purchase of pesticides.

Growers said that, in view of this situation, the Ministry of Agriculture must resolve these problems and, in particular, combat this plague with determination.

HAITI

Malaria, Typhoid Epidemics in South

FL2908000692 Port-au-Prince Radio Tropic FM
in French 1900 GMT 28 Aug 92

[Text] Malaria and typhoid epidemics are spreading in several communes of the Southern region and in Grand-Anse. Many cases were detected during the past few weeks in those areas, according to reports from health authorities.

HONDURAS

Whooping Cough Cases More Than Double

92WE0663B Tegucigalpa EL HERALDO in Spanish
31 Jul 92 p 2

[Text] Yesterday, the Ministry of Public Health Expanded Immunization Program (PAI) authorities confirmed that three children have died of whooping cough and 164 persons are suspected of having the disease. To date, this establishment has not been provided with the equipment needed to complete diagnoses of the disease.

One of the victims was an infant 13 months of age in Region One; another child, two years old, died in Olancho. The last death was that of a two-year-old child of two in Region Three.

Berenice Molina of the PAI said that since the beginning of the year, cases have been occurring in Region One, which includes Danli, El Paraiso, and a part of Francisco Morazan, as well as in Region Five, which includes Copan, Ocotepeque, and Lempira.

In addition, patients diagnosed with this disease have been reported in Region 7, which includes Olancho, and Region Three, which includes Cortes, Santa Barbara, and a part of Yoro.

The largest number of cases—50—has been reported in Region One. Of these, 10 involved children under five years of age, six of whom had not been vaccinated.

The diagnosis of whooping cough must be based on cultures of the bodily secretions of patients exhibiting symptoms. It is only beginning this year that the PAI has been carrying out this process, but it reports that no tests have been positive.

"The problem with this disease is that a number of respiratory ailments may cloud the diagnostic picture, and in many cases respiratory infections are diagnosed as whooping cough."

Our interlocutor explained that whooping cough is a bacterial disease that attacks the respiratory tract and strikes mainly children under five. However, it is fatal for infants under a year old, above all those who have not been immunized with the triple vaccine.

In 1991, 65 patients were suspected of having this disease, so that there was an increase in the number of cases. The largest number occurred in children over five years of age. It was not possible to establish whether they had been vaccinated or not.

Confirmed Cholera Cases Total 261

92WE0684B Tegucigalpa LA TRIBUNA in Spanish
20 Aug 92 p 25

[Text] The coordinator of the campaign against cholera, Carlos Alirio Cruz, has announced that with the addition of two individuals in Tegucigalpa yesterday, the total number of confirmed cases of the disease has reached 261. Cholera continues to lead in number of patients and deaths—six of the 11 reported nationwide. Cruz said that he is optimistic because he believes that the campaign against cholera has succeeded in reducing the number of diarrhea cases. A half-year comparison made by the Ministry of Health revealed that there has been a decline of 52,000 cases. He said that this means poor countries can overcome these diseases, since the treatment of "each diarrhea patient costs 350 lempiras." He also commented that cholera has not done as much damage here as elsewhere in Latin America. Guatemala, El Salvador, and Panama have reported most of the 20,000 cases on the regional level.

'New Virus' Kills Three

*PA0509151592C Mexico City NOTIMEX in Spanish
2338 GMT 30 Aug 92*

[Editorial Report] An new virus that produces symptoms similar to those produced by whooping cough is responsible for the death of three Honduran children in northern Honduras. Bernice Molina, chief of the Immunology Department of the Health Ministry has announced.

Total of 292 Cholera Cases

*PA0509151592D Mexico City NOTIMEX in Spanish
1650 GMT 2 Sep 92*

[Editorial Report] The Health Ministry reported on 2 September that with the six new cases of cholera reported by the local media, now there is a total of 292 cholera cases in Honduras. It has been reported officially that 13 persons died of cholera in the country since the virus first appeared in Honduras.

JAMAICA

Health Ministry Reports Nine Cases of Dengue Fever

*FL2908160992 Bridgetown CANA in English
1556 GMT 29 Aug 92*

[Excerpt] Kingston, Jamaica, Aug 29, CANA—Jamaica's Ministry of Health has reported nine confirmed cases of dengue fever. Eight of those persons contracted the illness in Kingston and St. Andrew, while the other person is from Manchester, central Jamaica. [Passage omitted]

The Health Ministry says anti-mosquito spraying will take place in those areas where cases of dengue have been confirmed. But officials here stress that much will depend on the willingness of citizens to clean up their environment and thereby reduce the opportunities for mosquitos to breed.

MEXICO

Cholera in Yucatan State

*PA0509151592G Madrid EFE in Spanish 2216 GMT
31 Aug 92*

[Editorial Report] Medical sources reported on 31 August that during the past seven days, 37 persons were infected with cholera in Yucatan State, which now has 377 cases of this disease. During the first seven months of 1992, the authorities have detected 4,180 cases of cholera and 45 persons have died.

Chiapas State Reports 915 Malaria Cases

*PA0509151592H Madrid EFE in Spanish 2350 GMT
31 Aug 92*

[Editorial Report] At least 915 persons have acquired malaria from January to June 1992 in Chiapas State alone, a Social Security hospital reported on 31 August.

PANAMA

Total of 447 Registered Malaria Cases

*PA0509151592I Panama City EL PANAMA AMERICA
in Spanish 31 Aug 92 p 14a*

[Editorial Report] The Health Ministry has reported that in July there were 60 new cases of malaria in Panama. The region with the most cases is Darien, with 27. With the new cases, there has been a total of 447 malaria cases registered in 1992.

Health Ministry Reports 116 Indians With Cholera

*PA0509151592J Panama City EL SIGLO in Spanish
1 Sep 92 p 12*

[Editorial Report] The Health Ministry has reported that 116 Indians from the Ailigandi and Nargana communities, in the San Blas region, acquired cholera this past weekend. None have died.

Cholera Epidemic Kills 55

*PA0509151592K Panama City LA PRENSA in Spanish
2 Sep 92 p 2a*

[Editorial Report] The Health Ministry has reported that in the past 24 hours eight new cases of cholera were detected in the Kuna Yala region and another three in Colon Province. A total of 55 persons have died since the epidemic was detected on 13 September 1991.

Total of 60 Cholera Deaths

*PA0509151592L Panama City LA PRENSA in Spanish
3 Sep 92 p 2*

[Editorial Report] Health Minister Guillermo Rolla has announced that a man and two women died yesterday of cholera in Darien and that now 60 persons have died of this disease since it first was detected in the country. Rolla noted that Indian culture has prevented health work in the area.

Outbreak of 49 New Malaria Cases

*PA0509151592M Panama City LA PRENSA in Spanish
3 Sep 92 p 4*

[Editorial Report] The director of the Panamanian National Service for the Eradication of Malaria has stated that the outbreak of 49 new cases of malaria in Bocas del Toro Province has resulted from the interruption in Costa Rica of that country's malaria eradication program.

TRINIDAD AND TOBAGO**Forty Hospitalized After Drinking Contaminated Water**

*FL0809181992 Bridgetown CANA in English
1508 GMT 8 Sep 92*

[Text] Port of Spain, Trinidad, Sept 8, CANA—Forty college students and three workers were rushed to the Port of Spain General Hospital on Monday after drinking water from a tank which contained a deadly herbicide.

The Ministry of Health confirmed that one student and three Labour Intensive Development (LID) programme workers who were showing serious symptoms, were still being treated in hospital.

A statement from the ministry said the water supply at Trinity College, north of Port of Spain, had been "contaminated by a substance which preliminary tests indicate to be gramoxone."

Stating that gramoxone was a toxic substance which can cause damage even on mild exposure, the ministry urged anyone who drank or tasted the water to report to the hospital "for assessment and treatment."

Police who were called in to investigate the circumstances surrounding the poisoning of the water, suspect the act was deliberate.

Classes at the college which has over 400 students, have been suspended indefinitely.

VENEZUELA**Over 2,000 Cholera Cases; 49 Deaths**

*PA0509151592N Mexico City NOTIMEX in Spanish
2356 GMT 28 Aug 92*

[Editorial Report] The Venezuelan Health Ministry reported on 28 August that 2,002 persons have been infected with cholera in Venezuela since the epidemic was detected in this country in December 1991. Of these cases, 49 have died.

ARMENIAN AFFAIRS

'Several Cases' of Anthrax in Yerevan

LD2509152492 Moscow Mayak Radio Network
in Russian 1430 GMT 24 Sep 92

[Text] Several inhabitants of Yerevan's Shengavit'skiy rayon have been admitted to the capital's infectious diseases hospital, suspected of being infected with malignant anthrax. They all consumed meat delivered by one of the city's co-ops to the ArmElektroMash Association's Trade center. Medical experts will make their final diagnosis tomorrow. The city's public prosecutor's office has started an inquiry into the incident.

Incidence of Brucellosis Growing

OW1908120592 Moscow INTERFAX in English
1037 GMT 19 Aug 92

[Following item transmitted via KYODO]

[Text] Armenia's Extraordinary Epidemic Commission asked the Armenian parliament to convene an extraordinary session to discuss a law on sanitary and anti-epidemic measures.

The Armenian Health Ministry's Chief Epidemiologist Shaliko Kazaryan told IF [INTERFAX] that over the first 6 months of the year more than 280 people have contracted brucellosis. No region of Armenia is adequately protected from epidemics, he said.

Kazaryan also said that among the causes of the epidemic is the privatization of cattle and the curtailment of the veterinary services following the elimination of state and collective farms. A corresponding law, he said, will help apply adequate measures against those violating the sanitary and anti-epidemic norms.

Typhoid Epidemic Said To Exist Among Armenian Fighters

NC2608203492 Baku AZERINFORM in Azeri
1121 GMT 25 Aug 92

[Report by AZERINFORM correspondent Goychek-khanim Tagiyeva]

[Text] Baku, 25 August (AZERINFORM)—It has been ascertained from sources close to the Armenian military leadership that this Republic's armed forces deployed in upper Karabakh and the Lachin corridor are facing a complex situation. This information also was confirmed by an Armenian serviceman taken prisoner in Azerbaijan's Kubatli'skiy Rayon.

The military units brought to Karabakh from Armenia are facing a severe shortage of fuel and military equipment. Due to a low supply of provisions and medicine, a typhoid epidemic has broken out among the staff of the Armenian expeditionary corps. There is an increase in the number of deserters who do not want to die in a

foreign land—150 more have joined the 200 Armenian soldiers avoiding the fighting. Despite every condition created by the Azerbaijani leadership to enable the transfer of injured Armenians to Armenia via the Lachin corridor, the Armenian expeditionary corps command is resorting to force to prevent the transfer of the deserters, injured, and local people to Armenia.

Niyazi Ibrahimov, head of the Azerbaijan president's press service, has urged the AZERINFORM correspondent to disseminate this report. Ibrahimov said: These developments are the result of the Armenian officials' fear that if these people are transferred to Armenia from the mountainous area of Karabakh, they will become a disruptive factor in Armenia and will further exacerbate the existing complex internal political situation.

INDIA

Gastroenteritis, Encephalitis in Madhya Pradesh

92WE0632 Bombay THE TIMES OF INDIA
in English 28 Jul 92 p 7

[Text] Raipur, July 27—Forty-five people, including several children, have died in Jashpur and Kharsia in Raigarh district from gastroenteritis and encephalitis in the past one week.

Mr. Nankumar Patel, the BJP MLA, and other BJP and Congress leaders have intimidated the district administration last week of the outbreak of epidemics, with the warning that in the absence of immediate medical assistance the epidemics may spread.

It was only after 200 tribals had staged angry demonstrations yesterday at Kharsia before the district officer that medical teams arrived.

Strategy to Check Kala-azar Spread Viewed

92WE0679A New Delhi INDIAN EXPRESS in English
12 Aug 92 p 6

[Text] New Delhi: The Centre has finalised a six point strategy to counter the spread of the deadly disease kala-azar in Bihar, which has shown an alarming increase in its intensity.

The mortality due to kala-azar rose from 477 in 1989 to 589 in 1990 and 865 in 1991, according to an official report.

The morbidity of kala-azar also recorded an alarming increase from 30,903 in 1989 to 54,650 in 1990 and 59,292 in 1991 in the state.

West Bengal was the second most affected state where the mortality has shown a rapid decline from 20 in 1989 to 16 in 1990 and mere three in 1991, the report said.

The largest populated state of Uttar Pradesh in the country recorded only one death in 1990 and 1991, the report said.

Assam, Delhi, Maharashtra, Karnataka and Tamil Nadu have also reported kala-azar cases that were imported from Bihar.

The available health facilities were being strengthened to arrest the spread of the disease. Staff at various levels have been identified and diagnostic and treatment facilities at peripheral level were also being augmented.

Regular monitoring of the supply and production of anti-kala-azar drugs, namely sodium antimony gluconate by Central and State Governments were underway to prevent the spread of the epidemic, the report said.

The government has also allowed the import of gluconic acid and tartaric acid—the two important ingredients required for manufacturing sodium antimony gluconate to the local manufacturers.

Adequate quantities of both indigenous sodium stibogluconate and imported pentamidine isothionate were being made available to the State Governments.

Orientation and training of medical and pharmaceutical personnel for early detection and treatment of kala-azar cases and intensification of health education activities for disease prevention were also being carried out, the report said.

Mysterious Disease Assumes Epidemic Form in Patna

BK2008105292 Delhi Doordarshan Television Network in English 1600 GMT 19 Aug 92

[Text] A mysterious disease has claimed over 20 lives in a slum colony of Patna during the last two days. Doctors have not been able to identify the disease so far, but suspect it to be the viral encephalitis. Our Patna correspondent Sudhanshu Ranjan reports that the center is sending a team to investigate the disease. The disease was first noticed last Thursday and soon assumed an epidemic form. A large number of people have been hospitalized in the Patna Medical College Hospital. The victims first have nausea followed by diarrhea. All the victims belong to pig rearing families. This has led to the suspicion that the disease may have been caused by close contacts with pigs which carry a Japanese virus. The district administration and voluntary organizations have started relief work in the affected area. The chief minister, Mr. Laloo Prasad Yadav, visited the affected area yesterday. He said hutment dwellers are being shifted to safe areas.

'Mystery' Disease Claims 50 Lives in Patna

92WE0678A Bombay THE SUNDAY TIMES OF INDIA 30 Aug 92 p 11

[Article by Neeraj Singh. Words in italics, as published]

[Text] Somaru Musahar of East Lohanipur is telling the Bihar chief minister, Mr. Laloo Prasad Yadav, how his

neighbours fell one by one to a mysterious disease. Mid-sentence, he collapses and is pronounced dead.

All hell breaks loose. An autopsy might unravel the mystery of the disease, but in the ensuing panic and confusion, the body is sent for cremation right away. Local doctors suspect that the killer disease is viral encephalitis caused by pigs and mosquitoes. But a Delhi team of experts dismisses the pig-borne encephalitis theory. "We cannot say anything at the moment," says another set of experts. Claims, counter-claims, chaos...

Some order returns as the epidemic wanes. "Thank God, it is over," sighs the civil surgeon.

But is the nightmare really over? Or do we refuse to see red even when we are sitting on a veritable minefield of garbage dumps, overflowing drains, polluted polls, leaking water mains and human and animal excreta littered along roadsides and railway tracks. When a disease of epidemic proportions that kills more than 50 people in four days goes unexplained, when the government fails to respond, it is clear that the system needs a complete overhaul.

East Lohanipur, where it all began, is a dingy Harijan *basti*, where about 600 families of *musahars* (pig-rearers) live amid filth and squalor. It is not surprising that people have died here. What is surprising is that the people manage to live in such abominable surroundings.

On 13 August, a six-year-old boy died here after a severe attack of diarrhoea and vomiting. The doctors could not diagnose the disease but dismissed it as a common occurrence in the slum during the rains. And so the matter went unreported. Three days later, the young wife of a municipal sweeper succumbed to similar symptoms but nobody took notice. On 17 August, the mysterious disease struck in full fury, killing 14 in a matter of hours. This finally shook the administration out of its stupor and VIPs, including the chief minister, made a beeline for Lohanipur.

In the melee, while everyone seemed eager to appear to be working, a comprehensive plan of action was not drawn up. While a few patients died shortly after complaining of restlessness, some others collapsed after continuous vomiting. In a majority of the cases, however, acute diarrhoea and vomiting was followed by loss of consciousness, leading to death. What confounded the doctors most was the sudden loss of consciousness, which often preceded the deterioration in the condition of patients. By afternoon, a group of government doctors, who displayed a serious lack of experience and training in crisis management, declared, on insufficient evidence, that the disease was viral encephalitis. On this presumption, no autopsy or systematic pathological examination of patients was carried out.

Abdicating their responsibility, the doctors declared that since facilities for virological examination were not locally available, any diagnosis would have to wait until final reports of the blood serum, cerebro-spinal fluid and

cadaveral samples of the brain sent to Pune and Bombay for neuro-histology and viral culture were received. But even this was not done for three days.

Meanwhile, the epidemic had spread to other areas of the city which are in no way behind East Lohanipur in filth and squalor—Bhanwarpokhar, Shahganj, Kankarbagh, Salipur, Kurji, Mandiri and the Boring Road slums.

It was widely acknowledged that the disease was primarily due to the unhygienic living conditions in the city. In this context, it may be pointed out that the Patna Municipal Corporation has been crippled by intermittent strikes by its 5,000-odd sweepers, the latest one continuing for more than three months. Heaps of garbage and overflowing drains can be seen all over the city. While the sweepers responded to the appeal by the chief minister and called off their strike, the junior doctors of the Patna Medical College Hospital struck work following a scuffle with the attendants of a patient. Their seniors followed suit to express solidarity. The hapless patients, who had earlier been unhappy with the callous attitude of the doctors, now found themselves on the road.

The district magistrate, meanwhile, declared an all-out war on the thousands of pigs in the city, the means of livelihood of the poor Harijans, and issued notices that if their owners did not remove them from the city limits within 24 hours, they would be destroyed. Following this, some people started brutally spearing and shooting pigs on the city streets causing a serious law and order crisis. The district magistrate withdrew his ill-advised notification only after the intervention of the director of animal husbandry and medical experts from Delhi.

With the disease yet to be identified with certitude, an operation to clean up Patna has been launched. What needs to be toned up first, however, is the administration. But there is no sign of that yet. Patna awaits a miracle.

Bhopal Declared Epidemic Zone Due to Cholera Outbreak

BK1708124492 Delhi All India Radio Network in English 1230 GMT 17 Aug 92

[Text] Entire Bhopal city has been declared an epidemic area following outbreak of cholera and diarrhea on Friday [14 August]. At present about 150 children are undergoing treatment at various hospitals. Our Bhopal correspondent reports that 20 children were admitted to hospitals today alone. Four lives have been lost so far.

Bhopal in Grip of Cholera Epidemic

92WE0680A New Delhi INDIAN EXPRESS in English 18 Aug 92 p 2

[Text] Bhopal: The Collector of Bhopal has declared the entire Bhopal district a "notified area" towards prevention of epidemics like cholera and gastroenteritis, according to an official press note issued on Monday evening.

The notification will remain in force for three months.

Over a dozen children have died of cholera in this district and the adjoining Sehore district in the past two days.

The disease has taken the epidemic form in the capital city, with nearly 200 patients having been admitted to various hospitals till Monday afternoon.

Officially, the casualty figure in Bhopal has been put at four. Asked to explain the discrepancy between the official and actual figures, Minister of State for Health Gaurishankar Shejwar told ENS that the official figures pertained to the deaths that occurred in the course of the treatment.

He said it had been established through tests that it was cholera "positively," and parts of Bhopal were in the grip of an epidemic. Lalghati, Nishatpura, Shahjehanabad and Govindpura were among the worst affected areas, he said.

Sixteen teams of doctors have been constituted for carrying out the measures to contain the epidemic. Isolation wards have been set up in the hospitals and extra beds have been put up. Anti-cholera vaccines are being inoculated on a large scale. The health department plans to distribute two lakh chlorine tablets.

Dr. Shejwar said that only children had been affected so far and efforts were on to see that adults did not get afflicted.

He said chief medical officers all over the state had been directed to take precautionary measures in their respective districts.

Reports from Sehore said that three children had died of cholera there, and another three in Badwani tehsil of Khargone district.

IRAN

Spread of Skin Disease in Gorgan, Gonbad

92AS1498H London KEYHAN in Persian 3 Sep 92 p 3

[Text] A new skin disease that the people of Gonbad call "Dracula," has spread through this city. This skin disease is caused by the bites of a winged insect called "pedarus," and it can lead to death in some instances if not treated quickly.

These insects appeared after heavy flooding last spring in Gorgan, Gonbad, and some parts of Mazandaran, and they caused heavy damage.

The European office of the Mellat Party of Iran, which reported this to the media, says that even now thousands of people in the area are suffering from the bites of this dangerous insect, and that so far health-care officials have done nothing effective to drive off this agent of skin disease.

NEPAL

Gastroenteritis Death Toll Exceeds 600

92WP0305A Kathmandu THE RISING NEPAL
in English 18 Aug 92 p 1

[Article: "Gastro-Enteritis Death Toll Crosses 600"]

[Text] Kathmandu, Aug 17: Gastro-enteritis has claimed over 600 lives in the country this year and the death toll may reach 1000.

Officials, however, said the rate of gastro-enteritis deaths in the country this year is likely to be 1 percent, compared to 1.9 percent last year when over 2000 people died of the disease.

Bajhang, Doti, Bajhura, Humla, Kalikot, Dhanusa, Ramechhap, Achham have been classified as most affected areas.

Baglung with over 100 deaths is the worst hit while Mugu with 96 deaths is second in the list.

Ignorance has been the prime cause of deaths which can be averted in most cases by the simple process of oral re-hydration therapy like Jeevan Jal, chief of Division of Epidemiology, Dr. Mahendra B. Bista, said.

And ignorance knows no bounds.

Often villagers leave diseased relatives to die alone and flee to neighbouring villages or nearby forests.

A touring health worker from the Division was witness to this spectacle in Mugu this year.

"Fear of contacting the disease drives them away from home, often leaving the whole village deserted," said the health worker talking to this reporter.

The disease comes fast under control in more accessible and conscious districts like Dhanusa which can be reached from the Valley with ease. "This helps in the relief processes," Dr. Bista said.

But health workers and medicines cannot be supplied readily to far-off districts like Humla, Bajhang, Mugu, Baglung and Bajhura where most of the relief supplies have been said to be made available through helicopters.

Dr. Bista, however, is confident that despite these odds there are going to be less gastro-enteritis deaths this year.

The gastro-enteritis complaints surface from the month of April and continues right up until Dashain.

The yearly festival shows a sudden upsurge in the disease which Dr. Bista attributes to "our unhealthy eating habits."

"Kathmandu Valley has also responded very positively this year," Bista added, "to our efforts."

"Altogether only 5,500 cases of gastro-enteritis have been reported this year as against more than 7,000 cases last year in the month of Shrawan alone."

Though the onslaught of gastro-enteritis continues up to the month of October the figures this year are going to be far more satisfactory compared to last year that saw more than 18,000 gastro-enteritis cases in the Valley.

What has contributed to this creditable performance?

A Task Force comprised of health workers was formed in the month of July under the leadership of the chief of Division of Epidemiology in the Valley, the division sources said.

"The Task Force took different measures to halt the disease before it could actually take the shape of an epidemic.

"Drinking water samples were taken from different localities in the Valley for examinations and we distributed bleaching powder to combat contamination."

The Division has stressed on health awareness like the need to boil water before drinking.

Likewise, bleaching powder can be used in water for other purposes, the Division sources said.

Twenty-eight people are reported to have died due to gastro-enteritis in the Valley this year which is said to be lower than the deaths reported by this time last year.

Death Toll From Gastroenteritis Epidemic May Reach 1,000

BK1808145992 Hong Kong AFP in English 1331 GMT
18 Aug 92

[Text] Kathmandu, Aug 18 (AFP)—The death toll in Nepal's gastroenteritis epidemic, which has already claimed 640 lives, is expected to reach 1,000 before mid-October when the rains cease, an official source said Tuesday.

The epidemic has affected two thirds of the country, with some 50,000 people already having been treated for the disease.

Dr. Mahendra Bahadur Bista, chief of the epidemiology division of the Public Health Department, said the regular gastroenteritis problem usually starts in April, reaches its peak in July, and can continue right up to October.

Last year 2,000 people died, while 100,000 were treated.

This year's reduced toll is attributed to improved supply lines of medical aid.

"Ignorance is the prime cause of deaths which can be averted by health education, by drinking boiled water, personal hygiene, proper sanitation and in most cases by giving the patient oral re-hydration solution," Bista said.

"If we can supply clean drinking water, 90 percent of this toll could be checked," he said.

"The disease can be brought under control in accessible districts," Bista suggested, "unlike other remote places where the health assistants and relief medical supplies have to be provided by helicopters."

A health assistant on assignment in the affected districts said the villagers often left the diseased relatives to die alone and flee to the nearby forests. "Fear of contracting the disease drives them away from home often deserting the whole village; they do not give water to the diseased relatives even when they beg for it, saying it further deteriorates the condition of the affected persons," he said.

Anthrax in Ukraine

92WE0587A Moscow *RABOCHAYA GAZETA*
in Russian 4 Jun 92 p 4

[Article by F. Sizyy: "Anthrax in the Ukrainian Steppes"]

[Text] A quarantine was imposed over Dolinskiy Rayon, Kirovograd Oblast by an order of the local leadership. Anthrax, a dangerous disease detected among inhabitants of Krivoy Rog who came to visit a brother, was the reason for it. While there, they slaughtered a home-raised calf. It was the original source of the disease.

The diagnosis of the disease, which has not been observed here for almost 20 years, was confirmed by specialists of the oblast epidemiological station in the laboratory. At the same time it was no secret to anyone that farm animals do periodically fall ill with anthrax at some farms.

The patient's life is not in danger today.

Anthrax in Western Georgia

92WE0602A Moscow *NEZAVISIMAYA GAZETA*
in Russian 22 Jul 92 p 6

[Text] In the opinion of specialists, Georgia's Tskhaltubskiy and Khobskiy rayons will become the epicenter of an epidemic. Cases of sale and consumption of farm animals killed by disease are the cause of this threatened epidemic. As many as four persons have been hospitalized with anthrax symptoms as of today. Steps are being taken to place markets and stores under sanitary control.

Forty-Two Anthrax Cases, 1 Death in Georgia

92WE0602B Moscow *NEZAVISIMAYA GAZETA*
in Russian 24 Jul 92 p 6

[Article: "One Person Dies of Anthrax"]

[Text] Georgian Deputy Health Minister Dzhorbenadze flew on short notice to Western Georgia, where the danger of an anthrax epidemic has been created. Special services are being established there to monitor the sanitary condition of the region. As of today, 42 persons have been put on record by medical institutions in connection with anthrax, 15 persons have been hospitalized, and one person has died.

Four Tver Oblast Residents Hospitalized with Anthrax

PM2808152992 Moscow *ROSSIYSKAYA GAZETA*
in Russian 28 Aug 92 First Edition p 8

[Unattributed report under the "News Panorama. Yesterday, Today, Tomorrow" rubric: "Meat Is Bad For You"]

[Text] Tver Oblast Radio broadcast a warning from the Commission on Emergency Situations yesterday, and following this the demand for meat at local markets fell instantaneously.

Four of the oblast's residents—a couple of pensioners from the village of Yagodino in Zubtsovskiy Rayon and some relatives of theirs who came to visit them, ate some roast lamb and were later taken to the hospital in a serious condition. The laboratory issued the frightening result of the analysis—anthrax.

The Tver Health and Epidemiology Inspectorate, which was worried about a mass outbreak of salmonella not so long ago, is once again in a state of alarm, looking for the source and spread of this very dangerous infection. It is being recommended that the residents of Tver and visitors to the oblast should not eat meat until the danger is eliminated.

Infectious Disease Outbreaks in CIS

92WE0587F Moscow *KOMMERSANT* in Russian
No 28, 6-13 Jul 92 p 27

[Article by Mikhail Mikhaylin, Andrey Novikov and Fedor Pavlov: "In the Dnestr Region: War Is Infection"]

[Text] Last week outbreaks and epidemics of infectious diseases were recorded in different regions of the CIS. Thirty-five persons from 10 to 45 years old have diphtheria in Saratov. In Ulyanovsk, 6 pigs died of anthrax, 91 persons were placed under observation, and anthrax globulin was administered to 7 infected individuals. A syphilis epidemic is spreading in the area of combat activities beyond the Dnestr region.

In the opinion of Saratov Epidemiological Station department director Irina Avdeyeva, people get diphtheria because they are afraid of combined vaccines, and they are afraid because "the press has frightened everyone." There is no connection between any of the cases, and therefore it is difficult to trace back to the source of infection. Saratov is on the threshold of a full-scale epidemic, Avdeyeva believes.

But in Ulyanovsk, the outbreak of anthrax was curtailed. Thus far the only victims of the disease are six pigs which, upon being infected, began sneezing and suffering angina. Trenches were dug around the pig farm in the town of Verkhniye Timersyany, and a traffic control barrier was installed at its entrance.

On 5 July Petr Bulgak, chief physician of the Kishinev city dermatological-venerological clinic, announced that since the war started the number of syphilis patients increased 90 percent in Kishinev and 1,000 percent in Tiraspol (in comparison with last year). The possibility that syphilis was transmitted as a means of sabotage is excluded, Bulgak feels. In the doctor's opinion the outbreak of Lewis's epidemic is explained by activation of war-related infectious elements, among which he

includes bums and prostitutes. It is practically impossible to reveal a source of infection in a time of war.

Raisa Tkachenko, chief physician of the dermatological-venerological clinic in Tiraspol, confirmed to a TVERDYY ZNAK correspondent that the war in the Dnestr region was marked by a wave of syphilis patients from the area of combat activities. In her words, bums, prostitutes and cooperative workers used to be the only clients of the dermatological and venerological clinic, "but now soldiers and even officers are coming in." Tiraspol's chief venerologist explains this by unbridled sexual life in the trenches.

Tickborne Encephalitis in Khabarovsk

92WE0587G Moscow PRAVDA in Russian 30 Jun 92
p 2

[Text] Five persons, including two children, died as a result of an increase in the frequency of tickborne encephalitis cases in Khabarovsk Kray. More than 30 other people were hospitalized, with 11 of the victims in the intensive care ward. The prediction offered by specialists of the kray epidemiological inspection service is not reassuring. They believe that this year the average number of deaths will be exceeded. One of the reasons for this is late application of victims for medical assistance, and refusal of preventive immunizations. Unfortunately, the price of vaccine has gone up dramatically. A fee of 250 rubles must be paid for the set of three immunizations.

'Local' Outbreak of Typhoid Fever in Luhansk

AU2209110292 Kiev MOLOD UKRAYINY
in Ukrainian 17 Sep 92 p 1

[Unattributed information published under the rubric "Fakt" [Fact]]

[Text] A local outbreak of typhoid fever was recorded in Luhansk. It is local because the majority of victims live in the same multi-story building. As explained at the town's Sanitary and Epidemiologic Center, drinking water was contaminated as a result of the damage to the sewage system and water pipe. By 15 September, 29 persons were hospitalized and the diagnosis was confirmed in 19 of the cases.

Typhoid Case in Vladivostok

PM0210130392 Moscow PRAVDA in Russian
30 Sep 92 p 1

[Report by Nikolay Bratchikov: "SOS: Typhoid in Vladivostok!"]

[Text] A naval college student drank some water from a crystal-clear stream in the Vladivostok resort area and found himself laid up in bed. The horrified doctors said it was typhoid! But why the surprise? The entire seaside city has such fetid liquid pumped to its apartments that its inhabitants could, God forbid, quite easily catch the

plague or cholera. And this, of course, is due not only to the fall cyclone, but also to the complete contempt shown by the authorities at all levels for the creation of a reliable purification system.

Diphtheria: Increasing Danger

92WE0604 Kiev SILSKI VISTI in Ukrainian
20 May 92 p 3

[Article by V. Mariyevskiy, Chief Sanitary Inspector of Ukraine]

A serious infectious disease - diphtheria is approaching the level of extremely dangerous epidemic in Ukraine. Last year 1,101 cases were registered (including 223 children) 47 of them fatal (including 12 children). Even to this day the situation remains very serious. In addition, the high risk group includes not only the children but also teenagers and some adult groups. The only hopeful barrier against the spread of diphtheria is a timely immuno-prophylaxis. The Minister of Health ordered intensified activity in this area. More precise vaccination schedules were reintroduced. A newly born child should be vaccinated at the age of 3 month with an obligatory booster at 4.5 and 6 months. If the booster shots are missed, the series should be started from the beginning, otherwise the expected benefit will not be achieved. Then four revaccinations follow at 2-2.5 years, 6, 11, and 15 years of age. It should be stressed that revaccination concerns the adult population as well. The high risk individuals should be immunized repeatedly every ten years (medical personnel, teachers in kindergartens, primary schools, universities, technical schools, boarding schools, students, businessmen, service providers, etc). This vaccination schedule should be strictly adhered to because only the whole immune system assures prevention of diphtheria infection. At this time medical centers in Ukraine have all required material for vaccination and revaccination. The children will be vaccinated using disposable syringes in presence of their parents if they so desire. An approach was taken making it possible to perform immunization even if it were contraindicated. Remember: only vaccination guarantees health in the current state of the epidemic. Refusing this life-saving measure, you will be risking the life of your children.

Two Die in Krasnoyarsk Kray Diphtheria 'Outbreak'

PM1409124192 Moscow KOMSOMOLSKAYA
PRAVDA in Russian 10 Sep 92 p 1

[INTERFAX report under the "Only the Facts" rubric: "Diphtheria"]

[Text] In the last few months 14 cases of adults catching diphtheria have been recorded in Krasnoyarsk. Two patients died a few days ago and another two are in a serious condition. The kray's sanitation and epidemiology service describes the cases of the illness as an

outbreak, since only 11 people caught diphtheria throughout the whole of last year.

Diphtheria, Dysentery Outbreaks in Various Oblasts

LD1809014292 Moscow Radio Rossii Network in Russian 1100 GMT 15 Sep 92

[Text] Outbreaks of diphtheria and dysentery have been registered in a number of oblasts in the Russian Federation. Thus, in the town of Stupino of the Moscow Oblast 96 cases of children with dysentery have been registered in kindergartens and schools. In St. Petersburg 140 cases of acute diphtheria have been registered in September, and in the town of Chapayevsk 30 gypsies were hospitalised with symptoms of diphtheria, ITAR-TASS reports.

Market Closed, Gypsies Quarantined in Diphtheria Outbreak

PM1809113592 Moscow KOMSOMOLSKAYA PRAVDA in Russian 16 Sep 92 p 2

[RIA report: "Epidemic in Encampment"]

[Text] Diphtheria bacilli have been discovered in almost 30 residents of the city of Chapayevsk, Samara Oblast. All the bacillus carriers are gypsies trading in the local market. The market has been closed down by order of the head of the city administration, because a real threat of an epidemic has arisen. A quarantine regime has been introduced in the houses where the patients lived. The houses have been placed under guard by the militia.

Cholera Case in Kerch Reported To Be Isolated Case

AU1409120592 Kiev HOLOS UKRAYINY in Ukrainian 4 Sep 92 pp 4,5

[Report by Anatoliy Polonsky from Crimea: "Has Cholera Spared Us?"]

[Text] Recent days were quite upsetting for the residents of Kerch. A case of cholera was diagnosed in the town.

This unpleasant fact was confirmed at various levels. Thus, more than two decades later, the "Eltor" cholera vibron has reminded Kerch residents about itself. This time, it appeared in a 32-year old Kerch resident. On 15 August, an ambulance brought him to the hospital with intestinal disorders. The doctors suspected cholera, which was confirmed by a laboratory test. In the medics' opinion, the sea where the patient had bathed could be the source of the terrible disease. However, most of them believe that the "Eltor" did not get into the patient's organism from water. Aqueous animals—small crayfish and mussels that the patient had eaten raw or half-cooked—could have been the carriers.

The physicians examined very carefully all the persons with whom the patient had been in contact. However, no cholera vibron was found in them.

Of course, the very mention of the word "cholera" causes alarm or even panic in people. This is particularly true since many Kerch residents (and not only them) still clearly remember the year 1970, when cholera acquired a mass character in the town. That is why in this case the town's sanitary services have taken this unpleasant fact very seriously.

An antiepidemic commission was called immediately. All the municipal services began to put everything in proper sanitary order. Moreover, in 30 locations in the Black Sea, water samples were taken for analysis. The people who were hospitalized at this time underwent medical examinations three times a day.

"As a result," as Ivan Kovalchuk, senior physician of the Kerch Sanitary and Epidemic Station, informed us, "we can now breathe easy again. We have managed to avoid a misfortune." Fortunately, it was a single case of cholera. Since ten days have passed since the discovery of a cholera vibron without any other cases breaking out, it was decided to close down the nidus of infection. "However," Ivan Kovalchuk stressed, "it is still too early to rest content." Therefore, the town's sanitation and epidemiology services continue to monitor the environment, and hygiene measures have been intensified. The beaches in the town are open, although there are not many people who want to bathe in the Black Sea. The patient found to be infected with cholera is already out of danger.

FRANCE

Source of Fatal Listeriosis Epidemic Unknown

92WE0584A Paris *LIBERATION* in French
18-19 Jul 92 p 32

[Unattributed article: "Listeriosis: The Epidemic Progresses"]

[Text] According to new estimates released by the Ministry of Health, the after-effects of a listeriosis epidemic, which has affected 53 departments, have left 29 people dead in France since 18 March. Usually quite rare, listeriosis is a bacterial disease which is not serious for healthy adults. But it can cause generalized infections (meningitis, blood-poisoning) and miscarriages; it can also affect newborns with risks of after-effects in some population groups. It can be particularly serious during pregnancy and among the elderly and/or people with depressed immune systems (cancers, immunodepressing treatments, AIDS).

By 10 July, there had been a total of 121 cases of listeriosis, 29 deaths, and seven miscarriages. A previous report, dated 24 June, mentioned 99 cases and 20 deaths in 42 departments. While the type of bacterium has been identified, the common source of this "sudden epidemic onset" still remains unknown. A special monitoring and investigative team of physicians was formed early in June by the Bernard Kouchner Services to track down the agent of this listeriosis.

Yesterday, the Ministry of Health also reminded persons at risk of the precautions to be taken. Food of animal origin must be cooked and leftovers reheated. Cheeses—soft, herb, and blue—as well as the drinking of milk must be avoided. Also, in case of an uncommon fever, without an apparent cause, a physician should be consulted.

GREECE

Rare Disease Affects Citrus Trees

92WE0635A Athens *TA NEA* in Greek 7 Aug 92 p 16

[Unattributed article: "Orange Trees in Attiki Are Dying"]

[Excerpt] A rare disease that has attacked over a million citrus trees has caused consternation in the municipalities of Attiki. The disease, called "alevrothis" [floury], appeared for the first time last July in the municipality of Papagos and then started spreading rapidly.

The disease is transmitted through an insect that lays its eggs on the leaves of "bitter" fruit trees (bitter orange, lemon, orange, and mandarin). Shortly afterwards, a whitish layer resembling salt appears under the surface where the eggs are located. Mrs. Soula Theodorou, an arboriculturist of the municipality of Viron, told *TA NEA*: "The disease is really destructive and has assumed epidemic proportions. Tree branches that have been

affected must be cut." Nevertheless, the disease also attacks new and healthy branches preventing the tree from growing normally.

The spread of the disease is so fast that while last year it had attacked the trees of eight municipalities of Attiki, this year the disease has spread to the entire Attiki basin and has even reached Aiyina.

Nevertheless, even though the disease is serious, the Ministry of Agriculture remains indifferent to appeals for help by the municipalities and citizens. At first, Mrs. Theodorou told *TA NEA*, an attempt was made last summer to confront the disease through a spraying program worked out by an employee of the Ministry of Agriculture. However, this program will not—in all probability—continue this summer. [passage omitted]

IRELAND

'Mad Cow Disease' Found in Donegal Herds

92WE0676 Dublin *IRISH INDEPENDENT* in English
13 Aug 92 p 11

[Text] Department of Agriculture sources in the Co Donegal yesterday confirmed two herds of cattle are to be destroyed following the discovery of BSE or "mad-cow" disease.

The herds are located on farms near Letterkenny, and Innishowen in the north of the county. An official veterinary spokesman said 30 animals will be affected. It is the third such case of BSE to be confirmed in Co Donegal this year.

The official added: "In order to preserve the high quality of Irish meat products, any suspected cases of BSE have to be investigated and dealt with immediately."

In Denmark, agriculture authorities expressed concern yesterday that beef exports could be hit following the diagnosis of the country's first case of BSE.

Veterinary authorities confirmed a cow imported from Scotland four years ago was suffering from the deadly disease which is spread through fodder.

Fourteen other animals in the same herd were slaughtered for "trade policy reasons."

UNITED KINGDOM

Equine Grass Sickness on Increase

92WE0644 London *THE DAILY TELEGRAPH*
in English 3 Aug 92 p 6

[Article by David Brown]

[Text] An investigation into an illness which kills about 600 horses a year in Britain—roughly one in every 100—has been launched by the Equine Grass Sickness Fund and the Animal Health Trust at Newmarket.

The Princess Royal, who lost one of her favourite horses to Equine Grass Sickness, is patron of the Fund, based at the Animal Diseases Research Association in Edinburgh.

Vets and scientists have tried for more than 70 years to find the cause of the illness, which can kill horses within 24 hours. Experts say it is on the increase.

Victims, which suffer sudden paralysis of the intestine, have ranged from ponies to Newmarket racehorses. Dead hares found near Newmarket have also shown signs of the illness.

The trust has launched a questionnaire to horse owners, vets and horse organisations. It hopes to establish the extent of the problem and to identify any common link.

Mr. Murdo Mackenzie, secretary of the Animal Diseases Research Association, said: "We are spending up to £30,000 a year, but we really should be spending £150,000."

Killer Mites Threaten Country's Bee Colonies

92WE0643 London THE DAILY TELEGRAPH
in English 4 Aug 92 p 4

[Article by Robert Bedlow]

[Text] The Government has rushed through permission for a new insecticide strip, to be used in the battle against invading killer mites that are threatening to destroy bee colonies throughout Britain.

The mite, *Varroa jacobsoni*, which can wipe out whole colonies, has spread from mainland Europe. The pest, a tiny, fawn-coloured mite known as varroa, has been found in 132 apiaries in 11 counties across southern England.

"But that is just the tip of the iceberg," said Mr. Medwyn Bew, head of the Ministry of Agriculture's National Bee Unit at Luddington, near Stratford-upon-Avon.

"We believe it is much more widespread. Varroa may have established itself in Britain and remained undetected for at least five years. Without the mite being checked, untreated colonies will die.

"The importance of saving the bee is not only for the disastrous consequences for honey-producers but for arable farmers and fruit growers who rely heavily on bees for crop pollination."

The Ministry yesterday granted a medicinal product licence for a new treatment to combat the outbreak. Developed by Bayer, the chemical and pharmaceutical group, Bayvarol relies on a method of diagnosis and control.

Plastic strips, impregnated with flumethrin, a synthetic pyrethroid, are suspended in the spaces between the honeycombs in the central brood-rearing area of a hive.

Bees crawling over the strips then distribute the active ingredient by physical contact. Flumethrin, which is highly selective, destroys the varroa mites on contact, but does not affect the bee colony.

Mr. Bew said the insecticide had undergone stringent safety, quality and efficacy tests before the licence was granted. No residues of the product were detectable in honey and it had already been in use in Austria and Switzerland with good results.

The strips, which will cost £5 for each hive to be treated, have been given the go-ahead by the Government's Veterinary Products Committee for general use in the country. The danger to bee colonies has been underlined by a Government ban on moving bees within a four-mile radius of the apiary, but Mr. Bew believes it has come too late.

One problem, he said, was to persuade 40,000 beekeepers, with an estimated 200,000 colonies, to use the treatment, and inspect hives for the blood-sucking mite which originated in the Far East and spread through Russia, Western Europe, the United States and South America.

Mr. Bew said: Varroa is now with us and we cannot get rid of it. All we can do is control its spread."

Wild colonies could not be treated, and some amateur beekeepers would not be prepared to pay for the treatment, which will have to continue yearly.

The treatment, available from veterinary surgeons, registered animal health distributors and some agricultural pharmacists, has to be applied in late summer after the honey harvest. It should also be used throughout the year for diagnosis.

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